NOVEMBER, 1954

Traffic Engineering

New Northland Shopping Center at Detroit

- Scramble in San Francisco
- A Hand Distributed Postcard Parking Survey
- The Economizing of Curb Parking Space
- Annual ITE Meeting Reports

Official Publication of the Institute of Traffic Engineers

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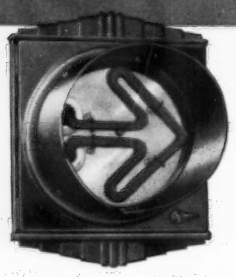

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Type TNO-1 One-Line Neon Signal

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TYPE F TRAFFIC CONTROLLER at the intersection of Taft and Reading Roads reduced the number of traffic accidents from 41 in 1951 to 23 in 1953. Inspecting the controller are (left to right) R. M. Fielding, Assistant Traffic Engineer of Cincinnati, G. W. Howie, Utilities Director of Cincinnati, and C. J. Schurenberg, General Electric traffic control specialist.

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A new traffic plan in Cincinnati, Ohio, has increased the average speed of vehicles by 7% since 1951, even though vehicle registration has increased by 10% during the same period. Credit for this improvement goes to George W. Howie, Utilities Director of Cincinnati, Robert J. Stock, and Roy Fielding, who have done the electrical and design work.

G-E TYPE F CONTROLLERS play an important part in Cincinnati's traffic plan. Over 100 Type F expansible controllers are now installed on several of the more important arterial streets.

TRAFFIC ACCIDENTS on highways feeding in to the city are another problem that Type F controllers have helped solve. Reading Road, pictured, is US 25 and US 42, and also carries a large amount of traffic from suburban areas. An interconnected system of 21 Type F expansible controllers and a G-E Type F master controller on one section of Reading Road brought about a 22% reduction in accidents after the signals were installed.

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Traffic Engineering

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COVER: Parking and traffic features are portrayed in this aerial photo of Northland Shopping Center, Detroit, Michigan. One of the Technical Sessions at the recent ITE Meeting in Kansas City featured a paper by Larry Smith, noted real estate economist on the traffic impact of shopping at such centers. Note the grade separated truck tunnel entering to the left and emerging from behind the center. This complete shopping facility costing 20 million dollars provides 7000 parking spaces.

DEFINITION: Traffic Engineering is that phase of engineering which deals with the planning and geometric design of streets, highways, and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods.

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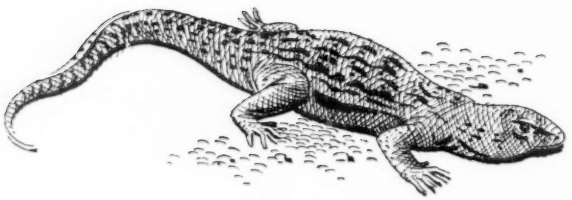

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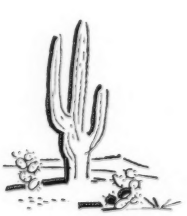


Frankly Speaking

THE SILVER ANNIVERSARY MEETING of the Institute of Traffic Engineers held in Kansas City September 27th, 1954 through September 30th, 1954 is now history. The Institute has grown from an organization of nineteen traffic engineers who assembled one evening in Pittsburgh in October, 1930 to a present membership of 828. Predictions have been made that by the time of the 25th Annual Meeting in Pittsburgh in 1955, the membership will reach 1,000. Members of the Institute of Traffic Engineers consist of traffic engineers throughout the world engaged in public and private enterprise, working for one common objective—"The planning and geometric design of streets, highways, and adjacent lands, so that traffic operating thereon may do so in the most safe and convenient manner."

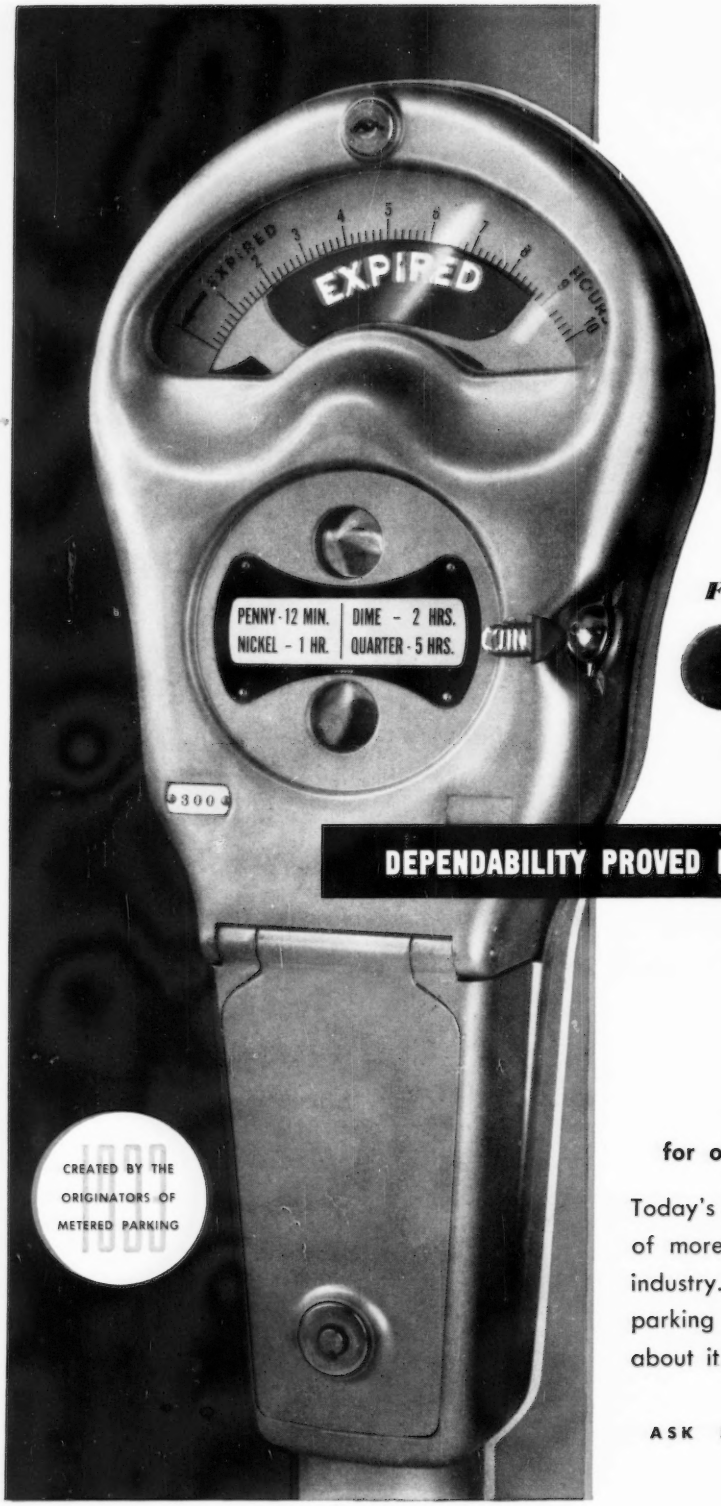
During the past year, your officers have concentrated on the stimulation of technical research through specific projects being studied by various committees of the Technical Council. At present, more than thirty committees are actively engaged in this research work and eight have already produced important findings. In the near future it is hoped that through these committees new ideas and devices will be developed for the betterment and improvement of traffic control. As a group we must be like the man who said, "The most successful man is the one who holds on to the old just as long as it's good and turns to the new just as soon as it's better." We are the group charged with developing those traffic techniques which are better.

It must be remembered that any value the Institute of Traffic Engineers has for the future, comes from the recognition it has achieved as a body—rather than from the fact that any one individual has proven outstanding. As an organization, we are of age, have proven our worth, and have gained recognition and acceptance from all national committees. Being made a participating agency of these national groups represents a challenge to us to lead in traffic research. Factual information which can be ascertained by special studies will help us to do a more outstanding job of controlling the 50% increase in traffic volumes which will probably occur in the next ten to fifteen years. No one person and no one technical committee can accomplish this alone. It is only when the entire membership will put forth added effort to aid in making the necessary studies that we can hope to have the proper answers for our future problems.

We owe it to our profession to give freely of our time and know-how so that this can be accomplished. There is a shortage of trained traffic engineers throughout the country. We must continue to move forward so that young engineers will want to follow the profession and build a firm foundation of respect and knowledge of traffic engineering so younger men will be attracted into this field. If this does not happen, there will be worse problems to face in the future, with no trained men to solve them.

I, as past President, sincerely appreciate and wish to thank the Board of Direction, those working on the technical committees, and each individual member for the splendid cooperation and wholehearted support which they rendered the Institute of Traffic Engineers during the past year. With united effort such as this continuing, I am certain the achievements of the Institute of Traffic Engineers will result in greater knowledge and sufficient technical information to enable us to solve the even more complex problems of the future.

Past President



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Scramble in San Francisco

By Ross T. Shoaf, City Traffic Engineer (Mem., ITE)
William Marconi, Assistant City Traffic Engineer (Jr. Mem., ITE)

Division of Traffic Engineering, Department of Public Works
San Francisco, California

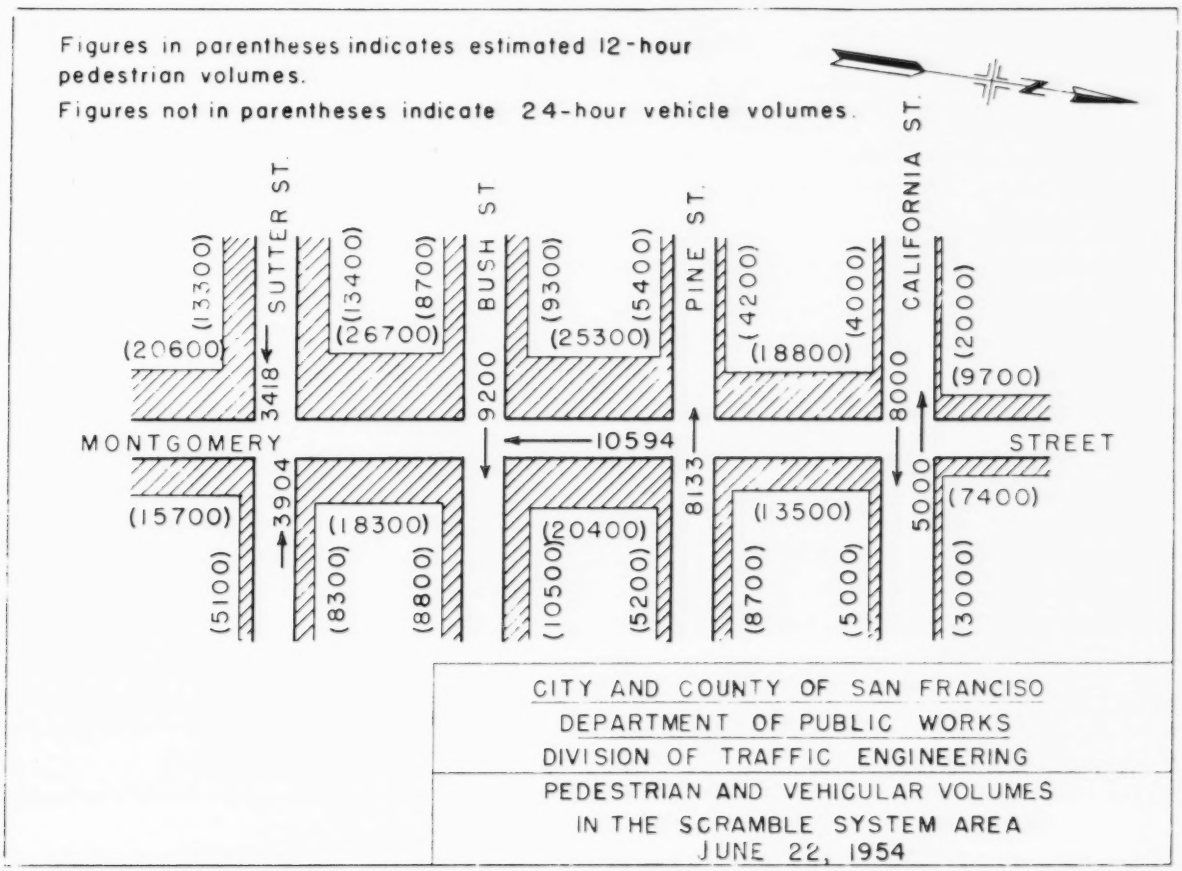


Fig. 1

THE PHENOMENAL INCREASE in automobile usage in the years following World War II with the concurrent increase in automobile accidents and traffic congestion has brought about a demand for new methods of traffic control in metropolitan areas. A method that has been enjoying a vogue in the last few years is the system of traffic signal control that separates pedestrian and vehicle conflicts by providing a completely separate pedestrian interval, popularly known as the "Scramble System."

Scramble Popular But Not Efficient

At the suggestion of civic leaders, the Police Department and the Department of Public Works of the City of San Francisco jointly undertook a trial Scramble System on Montgomery Street at the intersections of California, Pine, Bush and Sutter Streets. To appraise the effect, a "Before and After" study of traffic conditions was made. The study showed that "Scramble" for this installation increased vehicular travel time approximately 50% but that this added delay was not realized by the public who expressed great liking for the system.

High Volumes and Narrow Streets for Test

The trial installation in San Francisco, placed in operation on March 4, 1954, is in the heart of the financial district. Montgomery Street, the Wall Street of the West, has a daily traffic volume of 10,594 with a roadway width of 39 ft. sidewalks of 12 ft. each. This street is one-way southbound and has no transit operation on it. The streets crossing Montgomery Street have the following characteristics:

Street	*Roadway*	*Sidewalks*	*24-Hr. Volume*	*PM-Transit*
California St. (2-way street)	West Side 52′ 6″	15 ft.	13,000 v.p.d.	Cable cars at 5 min. headway in peak hours
	East Side 44′ 6″	19 ft.		
Pine Street (1-way west)	West Side 44′ 9″	12 ft.	8,133 "	None
	East Side 38′ 9″	15 ft.		
Bush Street (1-way east)	West Side 41′ 9″	15 ft.	9,200 "	One bus line 4 min. headway in peak
	East Side 38′ 9″	15 ft.		
Sutter Street (2-way street)	Both Sides 38′ 9″	15 ft.	7,322 "	4 bus lines. Min. headway in peak periods = 1.36 minutes

All four intersections have very heavy pedestrian volumes (see Figure 1) and heavy vehicular turning volumes. Three streets, Bush, Pine and Montgomery Streets are one-way streets.

Traffic along Montgomery Street is controlled by a set of single dial interconnected traffic signals which are timed for approximately 17 miles per hour. There is also progressive movement across Montgomery Street on Bush and Pine Streets with the signals set on those streets for 19 miles per hour. (See Figure 2.) The cycle length is 60 seconds of which 18-20 seconds is for the pedestrian phase. The "Before" and "After" signal timings are shown in Table 1.

One Walk-Wait neon pedestrian signal placed at each corner facing diagonally controls the pedestrians. All vehicular signals are louvered so as to not be visible to pedestrians. Standard crosswalks are used. These methods have proved adequate.

Method of Study

Speed and Delay Studies were made on Montgomery Street and all cross streets. The "Before" survey was conducted Tuesday, January 26 and Thursday, February 2, 1954; "Scramble" was placed in operation March 4 and "After" studies were made on the same days of the week in the first part of April.

Traffic counts made on the days of the Speed and Delay studies showed no significant difference in vehicular volumes. Photographs were taken to estimate pedestrian use of the diagonal crossing. An opinion survey of both pedestrian and motorists was conducted two days in the first part of May 1954.

Travel Time Increased

Table II shows the results of the Speed and Delay Studies and the method of analysis. Only the 12-hour periods from 7:00 A.M. to 7:00 P.M. were used as a basis for analysis. No studies were made during the other period. While it was supposed that added vehicular delay would also be experienced in the 7:00 P.M. to 7:00 A.M. period, it was not considered significant because of the relatively low traffic volume.

The average travel time for each street through the Scramble System was computed for the A.M., P.M., and off peak periods, multiplied by the traffic volume for each of those particular periods and totalled to arrive at the travel time consumed by all vehicles traversing the system on each street.

TABLE I
BEFORE AND AFTER SIGNAL TIMING

Intersection	*Before*			*After*		
Montgomery Street and California Street	Montgomery Street	Green	27″	Montgomery Street	Green	18
	Montgomery Street	Amber	3″	Montgomery Street	Amber	3
	California Street	Green	27″	California Street	Green	16
	California Street	Amber	3″	California Street	Green	3
				Ped. Walk		10
				Ped. Clearance		10
Montgomery Street and Pine Street	Montgomery Street	Green	29″	Montgomery Street	Green	16
	Montgomery Street	Amber	3″	Montgomery Street	Amber	3
	Pine Street	Green	25″	Pine Street	Green	20
	Pine Street	Amber	3″	Pine Street	Amber	3
				Ped. Walk		9
				Ped. Clearance		9
Montgomery Street and Bush Street	Montgomery Street	Green	29″	Montgomery Street	Green	19
	Montgomery Street	Amber	3″	Montgomery Street	Amber	3
	Bush Street	Green	25″	Bush Street	Green	17
	Bush Street	Amber	3″	Bush Street	Amber	3
				Ped. Walk		9
				Ped. Clearance		9
Montgomery Street and Sutter Street	Montgomery Street	Green	23″	Montgomery Street	Green	18
	Montgomery Street	Amber	3″	Montgomery Street	Amber	3
	Sutter Street	Green	31″	Sutter Street	Green	18
	Sutter Street	Amber	3″	Sutter Street	Amber	3
				Ped. Walk		9
				Ped. Clearance		9

TABLE II

BEFORE AND AFTER TRAVEL TIMES

	12-Hour Traffic Volume	*Average Travel Time (Secs.)*			*12-Hour Vehicle-Travel Time (Veh. Secs.)*	*12-Hour Increase in Travel Time (Veh. Secs.)*
Montgomery Street — California Street through Sutter Street (4 blocks)						
		Morning	Pk.	95.4″		
Before	8045	Off	Pk.	111.8″	919,900	
		Evening	Pk.	150.8″		
		Morning	Pk.	217.3″		
After	8045	Off	Pk.	215.6″	1,458,900	+ 539,700
		Evening	Pk.	171.5″		+ 58.6%
Bush Street — Kearny Street through Montgomery Street (1 block)						
Before	7504	A.M.	Pk.	35.0″		
		Off	Pk.	29.9″	238,400	
		P.M.	Pk.	45.5″		
		A.M.	Pk.	60.2″		
After	7504	Off	Pk.	62.5″	463,600	+ 225,200
		P.M.	Pk.	57.2″		+ 94.4%
Pine Street — Sansome Street through Montgomery Street (1 block)						
		Off	Pk.	27.0″		
Before	7133	P.M.	Pk.	30.0″	196,500	
		Off	Pk.	27.7″		
After	7133	P.M.	Pk.	53.0″	232,000	+ 35,500
						+ 18.1%
Sutter Street Eastbound; Kearny Street through Montgomery Street (1 block)						
Before	2829	A.M.	Pk.	25.0″		
		Off	Pk.	35.3″	100,000	
		P.M.	Pk.	44.8″		
		A.M.	Pk.	48.6″		
After	2829	Off	Pk.	49.1″	144,100	+ 44,100
		P.M.	Pk.	65.1″		+ 44.0%
Sutter Street Westbound; Sansome Street through Montgomery Street (1 block)						
		Off	Pk.	37.0″		
Before	3092	P.M.	Pk.	42.3″	116,500	
		Off	Pk.	44.1″		
After	3092	P.M.	Pk.	45.0″	137,700	+ 21,200
						+ 18.2%
California Street Westbound; Sansome through Montgomery Street (1 block)						
		A.M.	Pk.	32.3″		
Before	3500	Off	Pk.	55.8″	180,900	
		P.M.	Pk.	43.6″		
		A.M.	Pk.	33.0″		
After	3500	Off	Pk.	82.4″	243,200	+ 62,300
		P.M.	Pk.	38.3″		± 34.4%
California Street Eastbound; Kearny through Montgomery Street (1 block)						
		A.M.	Pk.	36.5″		
Before	5500	Off	Pk.	40.9″	220,300	
		P.M.	Pk.	37.2″		
		A.M.	Pk.	49.4″		
After	5500	Off	Pk.	43.1″	246,100	+ 25,800
		P.M.	Pk.	50.3″		+ 11.7%
SUMMARY OF ALL STREETS SHOWN ABOVE						
Total Travel Time		Before			1,972,500	
		After			2,925,600	+ 953,100
						+ 48.2%

On some streets, as can be seen from the table, travel times were actually lower in the peak periods than in the off peak periods. This is due to the "No Stopping - Towaway" regulations that exist during the peak.

Comparison of "Before" and "After" tests, indicated that on every cross street and on Montgomery Street itself, the average travel time for vehicles after installation of the Scramble System had increased substantially. The increase prevailed throughout the day both in the peak hours and off peak hours. The following table shows the percentage increase in travel time between 7:00 A.M. and 7:00 P.M. on each street after installation of the Scramble System:

Montgomery Street	58.6%
Bush Street	94.4%
Pine Street	18.1%
Sutter Street — westbound	18.2%
Sutter Street — eastbound	44.0%
California Street — westbound	34.4%
California Street — eastbound	11.7%
Average for all Streets	48.2%

During the 12-hour period, the travel time lost each day due to introduction of the Scramble System amounts to 265 vehicle hours.

The institution of a Scramble Traffic Control System has reduced the average speed of travel for vehicles on Montgomery Street from 6.2 miles per hour to 3.9 miles per hour and for the block through Montgomery Street on the cross streets from 9.2 miles per hour to 6.6 miles per hour.

Public Acceptance Overwhelming

Both pedestrians and motorists were interviewed regarding their opinion of the Scramble System. Only adults were interviewed with a slightly greater percentage of males than females in the sample. The questions asked are shown in TABLE III.

The interview of pedestrians and motorists showed an overwhelming preference for the Scramble System. Out of 340 pedestrians who had definite opinions, 300 indicated a liking and 40 a dislike. Without being advised that vehicular delay had been increased, 207 pedestrians said they would like to see the Scramble System continued even if added delay to automobiles were found and 80 said "No." Many of the people interviewed even volunteered the opinion that no delay whatsoever was incurred by motorists using the Scramble System. Of those pedestrians wishing the Scramble to continue in spite of increased vehicular delay, 97 did not normally drive a car on or across Montgomery Street and 110 did normally drive. Of those who did not want to see the continuation if delay was increased, 36 drove a car and 57 did not drive.

Of the 168 motorists interviewed who had definite opinions regarding the Scramble System, 142 expressed a liking for it and 26 a dislike.

Diagonal Crossing Light

A study of photographs taken during the noon hour revealed that less than 25% of the pedestrians using the intersection crossed diagonally.

Conclusions

1. The institution of Scramble signals has increased the travel time on streets through the system by amounts rang-

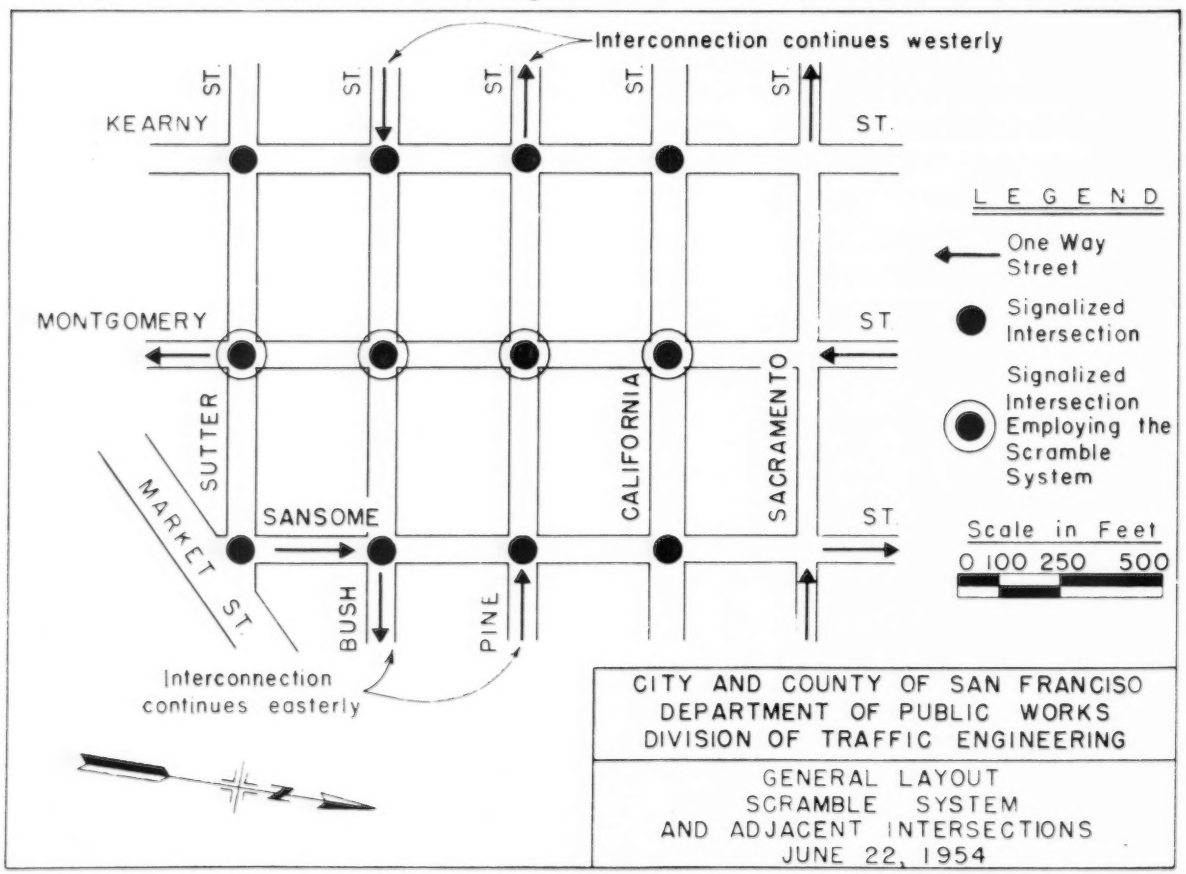


Fig. 2

Scramble period at Montgomery and Bush. Less than 25% of pedestrians cross diagonally.

ing from 11.7% to 94.4% and averaging 48.2%. From the low vehicle speeds that prevail it is obvious that some intersections are operating at possible capacity for long periods of the day. The capacity of the intersection could be increased and the delay lessened in small amounts by lengthening the signal cycle but this would have repercussions throughout the downtown area since the Scramble signals are part of an interconnected network of signals. Also the amount the cycle could be lengthened would be limited by two other factors; the natural impatience of pedestrians when required to wait for a longer period of time and the limited storage capacity of the streets due to short block lengths.

2. The Scramble system has met with very favorable public reaction from pedestrians and motorists alike; 88.5% of the pedestrians and 84.5% of the motorists expressing a liking for it. This appears to be due to three principal factors:

a. Scramble removes certain restrictions or prohibitions and develops a feeling of "freedom from bondage" for pedestrians.

b. Scramble removes the conflict between turning vehicles and pedestrians, and both motorist and pedestrian do experience relief from this type of hazard and delay.

c. Because the travel time for any trip through the area was already high and the added delay due to the Scramble at only four intersections was small in comparison, the full significance of the added delay was not realized by the motorists.

3. While it is not anticipated that "Scramble" will be removed from these four intersections in San Francisco there are no plans at present for extending the system.

TABLE III

Opinion Survey Questions

The following question line was used in the pedestrian interview study:

Pardon me. We are conducting an opinion poll on the Scramble Traffic Signals for pedestrians. Would you mind answering a few questions?

1. As a pedestrian do you like the Scramble type of signals? If the answer is NO: What is your reason, please? If the answer is YES: We are also making vehicular delay studies.
2. If it is found that there is an increase in delay to automobiles, do you think the Scramble signals should continue? If answer is YES, continue with 3. If Answer is NO, go to Question 4.
3. What in your opinion is the amount of additional delay that motorists should have to endure in order to continue the Scramble System? 10%, 50%, 100% or what? (Answers to this question were not firm and therefore not used.)
4. Do you normally ride an automobile along or across Montgomery Street where the Scramble signals are located? Thank you.

Question No. 3 proved of little value since most pedestrians had little concept of time delay or percentage values related to time delay.

The motorist interviews were conducted on Montgomery Street at the end of the Scramble System. Motorists were asked:

1. Do you like the Scramble System on Montgomery Street?

2. Did you enter the Scramble System at its beginning or somewhere in the middle?

A Hand Distributed Postcard Parking Survey

By Norman A. Abend and Clyde Scott
Graduate Students, Cornell University
Under Direction of
Taylor D. Lewis (Mem., ITE)
Associate Professor, Cornell University

ALTHOUGH POSTCARDS HAVE BEEN USED for postcard surveys in the past, no record can be found where they have been distributed by hand to the driver as he parked his car. Usually these cards have been given out at cordon stations or were mailed to registered car owners. These methods provided distribution of cards to the individual, regardless of where he parked his car. With hand distribution, better control over the survey is attained. Also, with personal contact, the expected return of postcards will be greater than the return from other methods.

This method of hand distributing postcards was used in a parking survey for the City of Cortland, New York (population 20,000) in April, 1954. Because of limited funds ($25.00 for postcards) hand distribution was chosen as the method most likely to give the best results. But because of limited time and personnel, hand distribution was not the only method used. Car window distribution was also used in this study of parking.

The design of the postcards was undertaken with considerable care in order that the questions asked would not

PARKING SURVEY

Where did you park?	___ meter ___ curb ___ parking lot ___ city lot	Reason for making trip.	___ Shopping ___ Business ___ Pleasure ___ Delivery
How far did you walk?	___ half-block ___ 1 block ___ 2 blocks ___ more than 2 blocks	How long did you park?	___ 9 - 11 a.m. ___ 11 - 1 p.m. ___ 1 - 3 p.m. ___ 3 - 6 p.m.

COMMENTS:

PARKING SURVEY

Where did you park?	☐ curb — meter ☐ curb — no meter ☐ parking lot	Purpose of trip.	☐ Business ☐ Pleasure ☐ Shopping ☐ Other
How far did you walk?	☐ ½ block ☐ 1 block ☐ 2 blocks ☐ more than 2 blocks	How long did you park?	☐ 9 - 11 a.m. ☐ 11 - 1 p.m. ☐ 1 - 3 p.m. ☐ 3 - 6 p.m.

COMMENTS:

PARKING SURVEY

Where did you park?	◯ Curb — meter ◯ curb — no meter ◯ parking lot	Purpose of trip.	◯ Business ◯ Pleasure ◯ Shopping ◯ Other
How far did you walk?	◯ 0 - 100 ft. ◯ 100 - 300 ft. ◯ 300 - 500 ft. ◯ over 500 ft.	When did you park?	◯ 9 - 11 a.m. ◯ 11 - 1 p.m. ◯ 1 - 3 p.m. ◯ 3 - 6 p.m.

COMMENTS:

Fig. 1
The three proposed drafts that were used to determine the best questions and answers to use in the survey.

PARKING SURVEY FOR THE CITY OF CORTLAND, N. Y.

YOU CAN HELP US SOLVE THE PROBLEM

Where did you park?	☐ Curb—no meter	Main reason for trip?	☐ Shopping
	☐ Curb—meter		☐ Business
	☐ Parking lot		☐ Pleasure
	☐ City parking lot		☐ Other
How far did you walk from car to principal destination?	☐ Half block	How long did you park?	☐ 1 hour or less
	☐ 1 block		☐ 1 - 2 hours
	☐ 2 blocks		☐ More than two hours
	☐ More than two blocks		From .....M. to .....M.

FILL IN THE CARD AND PUT IT IN A MAILBOX. THANK YOU.

YOUR COMMENTS:

Fig. 2
A copy of the postcard used in the survey. A square on the front of the card was marked to indicate the time and location where the card was distributed.

be misconstrued. Particular care was necessary because of the small size of the sample. In choosing the questions and answers to be used on the postcards, three different drafts were made, each draft consisting of different possible questions and answers. (See figure No. 1.) The proposed drafts were then subjected to a field test by a selected group of people. The purpose of this test was to eliminate the questions and possible answers that were confusing and, or, did not give the information in the desired form. A trial sample of 30 was used. This size sample may appear small but it was sufficient to establish which questions and answers were the best. Final copy for the postcards was thus determined. (See figure No. 2.)

The survey was conducted on a Friday, and was continued on the following Monday and Saturday. The only publicity for the survey was contained in several spot announcements over the radio on Friday, and two short newspaper articles which appeared on Saturday and Tuesday.

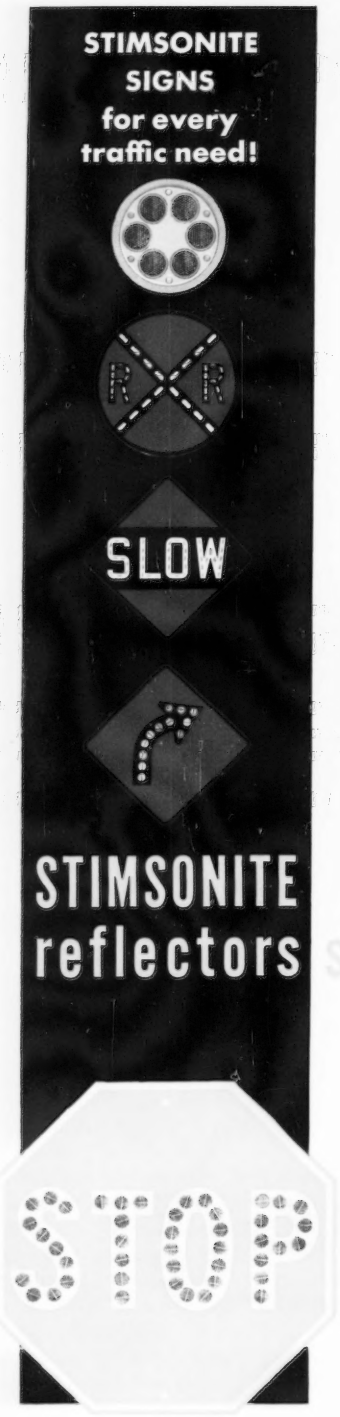
The distribution of cards on the first day was from 10 A.M. until 12 noon and from 1 P.M. until 2 P.M. Two men distributed the cards, each man covering one survey area for one hour. During the six man-hours, 216 cards were distributed. The rate of distribution, 36 cards per man-hour, may have been small because the men spent some time developing a system of distribution.

Each man used a different method. One man gave the cards to the driver as he parked or unparked his car. As soon as the driver turned off the ignition or before he had a chance to turn it on, if he was unparking, the field clerk would walk over to the driver's window, take a card from the stack he held in his hand and hold it up to the driver's face so as to allow him to read, "Parking Survey for the City of Cortland." (See sample card, figure No. 2.) The survey man then asked the driver, as he handed him the card, to fill the card in later when he had time, and to drop it in a mailbox. Letting the driver glance at the card enables him to see that the card is not an advertisement, appeal for charity, or other annoyance. This procedure worked very effectively, only four people refused to take cards during the survey. This method of giving the driver the card while he is in the car increases the chance that he will have the card when he arrives home. Talking to the driver while he is in the car eliminates the possibility that he would walk away or brush past before he has seen the card.

The second method used was to give the card to the driver as he deposited money into the parking meter. The same approach was used as in the first method with respect to handing out the card. This second method has the advantage that the card is given to the driver as he is "actively" using a parking facility. One disadvantage of the second method is that often the driver can see if there is leftover time on the meter from the previous parker without going to the meter. If there is unusued time, or if the parker expects to park only for a short time, he may not use the meter at all, and the chance to present a card is lost. Giving the cards out at the meter has the advantage of being less hazardous than the first method. In that case the distributor was forced to approach the vehicle from the street or traffic side.

On Monday, the second day of distribution, 120 cards were distributed from 12 noon until 2:30 P.M. by one man. This was an average of 48 cards per man-hour. This increase in output per man-hour, from 36 for the first day, was due to the increased experience of the distributor in spotting cars parking and unparking. Empty spaces should be watched since the opportunity to hand out a card will probably present itself within a short time. Also watching to see how much time there is left on a meter gives an indication of how soon the driver may be expected back.

Postcard output during the busy hours of the day is also dependent upon the type of parking facility. For a parking lot of 100 cars capacity, with no time limit, there should not be any difficulty in distributing from 75 to 100 cards per hour. This figure will depend upon the number of all-day parkers using the lot, being lower for larger amounts of all-day parkers. Metered curb with a time limit of 1 hour will not yield higher than 55 cards per hour. Unmetered curb will give the lowest yield, about 30 cards per hour.



Even the smallest STIMSONITE signal is quickly and easily identified by motorists . . . despite glare from oncoming headlights.

from these tiny delineators . . .

to the largest of traffic signs . . .

Workmen erecting the largest reflectorized traffic sign on the New York State Thruway. This sign is legible from more than a third of a mile.

show up better from all angles

Moderate first cost . . . low maintenance cost . . . long life . permanently sealed reflectors . . . more intense return beam . . . effective, wet or dry.

Radar speed signs on Virginia state highways.

Directional signs on Florida state roads.

Easy-to-use STIMSONITE embossed, cut-out letters eliminate the need for costly sign production equipment.

STIMSONITE® *for* Seeability Readability Durability

AGA DIVISION

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1027 NEWARK AVENUE, ELIZABETH 3, NEW JERSEY

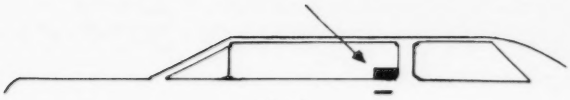

Fig. 3

Location in window of window distributed card. This location is very convenient to the driver opening his car.

Return on postcards for the first day was 37%; return from the second day postcards was 43%. The reason for the low return on the first day may be due to the lack of publicity before the survey got under way. There was no publicity before the survey and only a small amount on the first day and on Saturday, as was previously mentioned. Like any survey this one would have fared better with a large amount of advance publicity.

In addition to the presentation of the cards to the drivers, cards were distributed by placing them in the driver's side window. The City of Cortland has an ordinance prohibiting placing of printed matter under the windshield wipers and although permission was granted to place the cards under the windshield wipers it was felt that it would create bad publicity. It was also felt that better results would be obtained if the cards were placed in the side window. (See figure No. 3.)

Fifty window placed cards were given out on the first day, 50 on the second day, and 590 on the third day (which was devoted entirely to window distribution). Five man-hours were spent in distributing the cards on the third day, which was an average of 118 per hour. Returns were 52% for the first day, 34% for the second day, and 27% for the third day. These figures indicate that a survey should be completed as soon as is possible to get the best return from postcards. The returns from the first day are unusually high. (See figure No. 4.)

Although results for the hand distribution for the first day are not favorable compared to the window distribution for the first day, the return of handed cards for the second day was much better than the return of window cards for

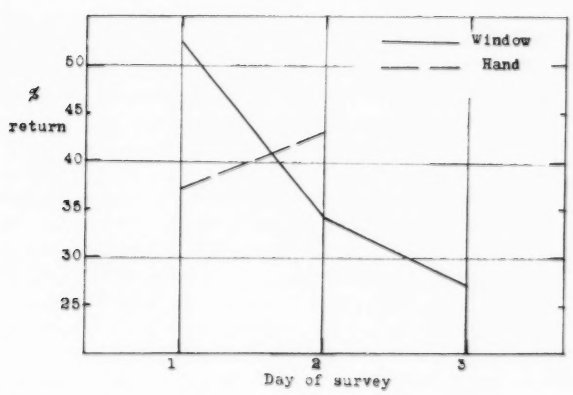

Fig. 4

Comparison of return of postcards distributed by hand and those distributed by window method.

NO SMOKING
Now
EN-DUR-ALL*
SIGNS
Impervious to wind, blowing sand...heat or cold! Extremely resistant to bending, gun shot... other vandalism!
Meets all official standards!
Available in sizes, shapes and colors to meet any specification or blank for painting...
non-reflectorized or reflectorized with "Scotchlite."
* A molded, rubberized plastic material 3 times more durable than metal.
Clip this form and mail, for additional information.
SPEED LIMIT 35
EXIT
Gentlemen: Please send me complete information on "EN-DUR-ALL" Road, Street and Property Signs:
DENVER PLASTICS, INC.
15200 W. Colfax, Golden, Colo.
Name
Address
City
State

that day. With improved distribution methods the hand method can compare favorably with other types of postcard parking surveys. This method has the advantage of giving complete control as to location and time of parking. The distributor can mark on a corner of the card the area in which the card is to be distributed and the time it is to be distributed.

Cost of distributing the cards, assuming a rate of 40 cards per hour and a pay rate of $2.00 per hour is 5c per card. Cost of printing the cards can be negligible with the use of a mimeograph machine. However, mimeographing is not the best method of reproduction because it gives the cards a non-official look which might decrease returns.

Hand distributing postcards is a much better method for gaining parking information from postcards. Whereas most postcards for parking surveys are given out regardless of where or when the driver parks, hand distributed postcards are given only to parkers in the survey area at the time of the survey. This method results in a much smaller number of cards to be analyzed, thus keeping the analysis costs and time lower than for other methods but produces the same information. Also it is believed that personal contact does increase the return, thus lowering the cost of distribution per card returned.

The Economizing of Curb Parking Space

A Suggestion for a New Approach to Parking Meters

By William Vickery

Associate Professor Economics, Columbia University, New York City

Some traffic engineers have long felt that parking meter fees should be priced according to location desirability and use; however, no really practical system to accomplish this has been developed. The following article suggests a way to do it but unfortunately, the complexity of the system proposed is such that there is much room for doubt as to its practicability. On the other hand, the thinking of Mr. Vickery is most refreshing and we are sure this article will provoke comment. A Pay-as-you-leave parking meter, arranged to collect a parking fee varying not only with the length of time a car is parked, but with intensity of demand for space in the same vicinity as well, at a level sufficient to keep some space available is what the author proposes. Of course, Mr. Vickery agrees that no substantial part of the parking problem can ever be solved with on-street parking no matter how efficiently such space is utilized.—EDITOR.

UNCONTROLLED PARKING of automobiles on the streets in large cities produces extremely unsatisfactory results, both in terms of impeding the flow of traffic through the streets, and in causing would-be parkers to spend an undue amount of time and effort in finding a place to park and in making it in many cases impossible for persons who need to get to a given destination in a hurry to find a parking space within a reasonable distance of their destination. In addition, dense parking may make it difficult for trucks to make deliveries, may cause double parking for such deliveries impeding again the flow of traffic, and may hinder the operation of street cleaning and waste-collection. In some areas parked cars may constitute a hazard to children.

Some of these problems may be met by prohibiting parking at certain places and in certain periods. The more difficult problem is to devise a method of control at times and places parking is to be permitted, so as to insure the economical utilization of such space. If this problem can be adequately solved, the remaining aspects of the parking problem can probably be taken care of by relatively simple adaptations. Accordingly, the following discussion will initially be limited to the control of parking where the only objection to the use of a given space by a given individual is that he may thereby be depriving someone else of the privilege of using it.

Present Inefficiencies

From the economist's point of view, the methods of control so far attempted are essentially types of rationing. Regulations typically limit the length of time an individual may park on any one occasion; such limitations may be imposed only during those periods of the day during which the space is in relatively heavy demand but often are in effect at all times. Such regulations are, almost necessarily, highly inefficient in the rationing of parking space. If no one would want to park more than the allotted time, the regulation has no effect, while if there is someone who has an urgent need to park for two hours, say, in a one-hour space, he will be barred and have to go elsewhere to a less convenient spot, even though his need is greater and he would have been willing to pay much more for the privilege than would the two one-hour parkers he might displace.

The situation is made worse by the fact that the permissible length of stay is almost always fixed at one uniform level during the entire period for which restrictions are in effect at all. This means that if the permitted duration of parking is short enough so that even during periods of heavy demand parking is adequately curtailed (between the exclusion of those who wish to park for a longer period and a higher turnover of short period parkers) so that no would-be parker has to seek long for a space, then in periods of light demand within the period during which the limit applies, there will be many unused spaces which longer-term parkers could use to good advantage if permitted to do so, at no inconvenience to others.

Ideally, it would be desirable to vary the time limit on parking with the time of day and between weekdays and holidays so that there would normally be a sufficient number of vacant spaces to make it unlikely that any large number of intending parkers would be unable to find a space within a reasonably short distance. Regulations of this sort, however, would probably prove almost completely unenforceable. Indeed, it is notorious that anything approaching strict enforcement of time limits on parking, as distinguished from complete prohibitions on parking at particular times, are extremely expensive to enforce, and are widely infringed nearly everywhere.

One possible modification of the usual parking limit rule would be to provide that even when a car has parked over the applicable limit, no violation will be considered to have taken place unless the five or ten adjacent parking spaces are all occupied at some time after the expiration of the limit, and no summons would be issued unless at the time it is issued the adjacent spaces are full. This would, in effect, mean that parking would be freely allowed as long as there remains parking space for others. The difficulty with this is that it would make violators of those who merely guessed wrong as to the number of other cars that would want to park in the vicinity in the period before they plan to return to their car; to impose a fine or similar penalty on such persons would certainly produce considerable dissatisfaction.

Somewhat similar remarks apply to present types of parking meters as they are now employed. In most cases the function of the meter is simply to make the parking limit more enforceable. While to be sure a price is exacted for the use of parking space, this price is in most cases insufficient to be the prime rationing factor: parking in meter-controlled areas is restrained primarily by the greater degree

of compliance with the time limit that can be secured. In some cases it is not legally permissible to park for a second consecutive period merely by putting another coin in the meter; however, it is doubtful whether such action would be proceeded against in any but the most flagrant case; it is the inconvenience, in most cases, of returning to insert additional coins in the meter that makes this practice insignificant.

Some meters, to be sure, can be arranged to take several coins at once, and thus to permit prepayment for various periods of time up to a given maximum. In most cases, however, it is still the maximum limit that is the effective restraint on parkers, and the only purpose served by the multiple coin device is to abate the dissatisfaction that otherwise can arise with single-coin meters when short-time parkers are nevertheless required to pay for the full term. There is also the possibility that with single-coin meters parkers may waste time and congest traffic by looking for a meter that has some unused time still registered on it. There was recently a news story to the effect that a meter had been devised with a magnetic device that would trip the meter back to zero when the car was driven away. On the whole, this seems to be an instance of misguided ingenuity: it does not seem that utilization of parking space would in any way be improved by the addition of this feature to the meters; their only accomplishment would be to cajole a few extra nickels from the pockets of parkers into the public treasury. Even assuming that such devices are quite inexpensive and that they are free from such troubles as being tripped by someone swinging a pair of roller skates close to the meter, this would seem to be a very expensive way to raise revenue.

Thus, parking meters as at present used still fall considerably short of meeting the need for a method of economically controlling the use of parking space. Given a sufficiently restrictive maximum time limit, meters make it possible for short-term parkers to find space promptly, even during periods of heaviest demand. But at periods when demand is less heavy, they make it more difficult for longer term parkers to find space, and indeed keep space from being used at all—not because of the payment required, but because of the relative certainty that overtime parking will be detected and penalized. On the other hand, if the time limit is made longer to avoid underutilization of space in periods of lighter demand, there will be congestion and inability to find space promptly during the peak periods.

Conceivably, a parking meter could be constructed that would run at different rates at different times of the day so that depositing a coin would prepay a varying period of parking; say twenty minutes during rush periods and up to several hours during other periods. The limit would then be adjusted, for various times of day and for various neighborhoods, so that in each neighborhood it almost never becomes very difficult to find a vacant parking place, and so that during the time when the deposit of a coin is required, the bulk of the parking places are in use. This would insure that parkers would not be barred from the use of parking space by unduly short limits when parking space is plentiful, and, on the other hand, would insure that short-term parkers, at least, would nearly always be able to find a place close to their destination and without too much searching. Parking space would thus be utilized as fully as it can be without making it unduly difficult, on occasion, to find an empty space. However, this scheme still leaves much to be desired. As a practical matter, it will be difficult to work out in detail the schedule for each group of parking meters so as to keep demand and supply in balance at all times. The mechanism would presumably be not too complicated if all that is necessary is a daily variation for weekdays, with restrictions inapplicable on Sundays and Holidays. But if the meter is required to vary the limit according to a different schedule on Saturdays, Sundays, and Holidays, then either a fairly complicated mechanism is required or a fairly extensive servicing job is required to set the meters every time the schedule changes. More serious, it would probably be difficult for motorists to know or determine in advance how long they are permitted to park in a certain area at a certain time, and some irritation may be created through parkers getting into a space only to find when they come to examine the instructions on the meter that the currently applicable limit is insufficient for their purposes. Also, in common with all prepayment meters, and in fact with any strict time limit, it is not always possible for a parker to tell how long his particular business is going to take, and again a violation may result from merely making a wrong forecast of how long one is going to have to wait in someone's office.

But more fundamentally, though such a meter could insure that parking space was as fully used as possible, subject to having some unused margin available, it is incapable of seeing to it that the space is used by those who have most need of it. For example, in a period of heavy demand it might be necessary to restrict parking to twenty minutes or half an hour in order to keep space available. This means that those who will need to park for only twenty minutes at a time can find parking space no matter how inconsequential their need, provided only that they are willing to pay the nominal meter fee, while those who need more than twenty minutes will have to go elsewhere, possibly at much greater inconvenience. For example: A may have several brief errands to do at slight distances from each other; A thus has a choice between parking for an hour or two on the fringes and walking from one place to another, or driving from one place to the next, parking briefly at each. Which A does may be a matter of relatively little importance to A. B, however, may be a stranger in town with a strictly limited amount of time, or may be pressed for some other reason, or may have heavy parcels to carry, or may be an invalid or may be driving a carful of children, and may have an appointment requiring an hour or more. Parking close to his destination may be much more important for B than A, yet under any of the present meter arrangements, either the time limit is such that B cannot park at all for the necessary time, or the limit is such that although it would be legal for B to park the required time if he could find a place, so many others come within the limit that all the space is taken and B is unable to find a space close at hand except by sheer good luck. It may of course be true that on the average it is preferable to have a space occupied three times by short-term parkers than by a single long term parker, since in the former case within a given time three persons would reap the benefit derived from coming close to their destination, and in the latter only one. Nevertheless what is true on the average is not true in particular cases, and in many instances it will be more important from every point of view to have the space occupied by a particular long-term parker rather than the short-term parkers he would displace.

Pricing Instead of Rationing

If such situations are to be dealt with economically, it will be necessary to abandon the rationing concept of parking control, and adopt instead a concept of renting parking space

to the parker in accordance with principles of the market in which demand is held down to the supply by means of the price charged. As applied to parking, this means allowing parkers to park as long as they wish (within ultimate limits of the order of 24 hours or more to facilitate dealing with abandoned vehicles and similar contingencies), subject to the payment of a fee commensurate with the time over which the car is parked, and at a level so determined as to keep the amount of parking down sufficiently so that there will almost always be space available for those willing to pay the fee.

This will mean in many cases a substantial increase in the rates over those now in effect in most parking meter installations. Some indication of what levels parking meter rates should be set at to adequately control parking is to be had by observing the rates charged for parking in parking lots. Such parking is for most purposes inferior to curb parking, assuming that the latter is readily available. Curb parking provides immediate access to the car, whereas in many parking lots considerable shuffling about is often necessary to obtain access to a given car. Curb parking in most cases can be nearer to the destination than a parking lot, which often may be two or three blocks from the destination. Indeed, if curb parking is adequately controlled by the meter charge, there should be space available within 100 yards or so of almost every destination at nearly all times. With curb parking there is less wear and tear on battery and starter from having the car shuffled about. While parking in a lot provides some supervision against theft, the fact that in most cases the keys must be left with the attendants provides an additional risk that probably offsets most of the disadvantage of curb parking in this respect. In some cases offstreet parking provides heat and protection against the weather, but for the bulk of short-term parkers this appears to be a minor consideration. Yet, in spite of these advantages of curb parking, meter rates are almost always but a fraction of those charged in parking lots. Ten cents for one hour appears to be about the highest rate charged by meters, whereas it seems to be relatively rare for downtown parking lots to charge less than 25 cents; while this in some cases may be for the entire day, on the other end of the scale, downtown lots often charge as much as 75 cents for the first hour and 25 cents an hour thereafter. If the meter rate is to be such as to control parking without the imposition of a rationing limit, it would seem that curb parking rates would have to be higher rather than lower than the rates for parking lots. In any case, the rates would vary considerably from neighborhood to neighborhood and from time to time; it would seem very likely that for a substantial part of the downtown areas of large cities the rate might have to go as high as 5 cents for each 15 minutes, or even higher, in order to keep the parking space from becoming preempted by the early birds.

With the rates set at such higher levels, and with meters made so as to vary the rate according to the estimated intensity of demand for parking space at various times of the day, a fairly good approach to economical utilization of the available parking space would in principle be attainable. In practice, however, there would be several difficulties with such a scheme. First, the use of prepayment meters would encounter considerable difficulty when the rate is so much higher and when there would be the possibility of depositing the fee for an extended period of parking. The difficulty for some of predicting how long they would be parked would be accentuated, and there would be a stronger tendency to shave the estimate a bit close, with the correspondingly greater frequency with which violations would occur, with the result either of an increased enforcement load or an impairment of morale and a breakdown of compliance. Also, with a variable rate it would be more difficult for parkers to figure out how much they must deposit for any given period, with resulting confusion and dissatisfaction. To meet these difficulties it is necessary to devise some scheme which will permit the net payment to be determined at the end of the parking period, instead of requiring prepayment.

Perhaps an even greater difficulty, however, is that of adjusting the rates so that space in each neighborhood is fully utilized, but not overcrowded. Demand varies not only by time of day and by day of week, but seasonally; there are special occasions that do not fit into any regular pattern, and non-recurring shifts in demand may also take place fairly rapidly. Even if an agency charged with the setting of the meter rates were to concern itself only with the regular recurrent patterns of use, it would have to have a rather substantial staff to analyze patterns of parking space use and to adjust the rates accordingly. This process would in many cases be subject to pressures by the various interests affected, and if the job was not done well the resulting pattern might appear wholly arbitrary to many, with a resulting lowering of morale and compliance.

A Demand-Controlled Meter-Rate

The problem of determining the pattern of rates might be avoided almost entirely and a more flexible adaptation of charges to demand might be obtained by making the rate depend on the degree to which the parking space in a given neighborhood was being utilized at a given moment. This could be done, for example, by controlling a group of say 20 parking spaces from 20 corresponding interconnected parking meters. The meters could be arranged so that whenever more than say 3 out of the 20 spaces are vacant, there would be no charge; whenever only 3 spaces are unoccupied a slight charge would be made; the charge would become higher as more spaces are occupied, and would be quite high if all of the spaces should become occupied. In this way there would be an automatic adjustment of the rate to variations in use.

With the rate dependent on the number of nearby vacancies, there would be an incentive for each parker to park so far as possible in locations where demand is light, and there will be a natural tendency for the long-term parkers to park somewhat further away from the areas of heaviest demand, even if there is no variation in the nominal schedule of rates, since the effective rates will be lighter by reason of the larger proportion of vacant spaces. It will still be possible to vary the rates by appropriate regulation as between different areas, but the exact location of the boundaries between the different rate areas will not be so important, since the differentials in occupancy rates on either side of the boundary will tend to bring the effective rates into approximate equality, with a general tendency of the effective rates to graduate downward as the distance from the congested area increases, in a much smoother manner than would be possible by regulation alone.

There will, to be sure, be an incentive for parkers to park in such a way as to keep the effective rate for themselves low by discouraging others from parking in the adjacent spaces. Some care will be needed in marking the spaces to indicate clearly the limits within which cars are to be parked, and penalties may need to be imposed in cases where cars are parked in such a way as to encroach on neighboring spaces.

With this scheme of automatically adjusting the rate, it becomes more than ever necessary to provide for some means of determining the charge when the parker leaves his space, since at the time he leaves his car in the space he will have no way of knowing for sure just what the charge will be for a given length of time. Fortunately, it appears possible to devise a reasonably simple scheme for post-payment meters as follows:

A Post-Payment Meter

Each meter will have an indicator, similar to those on present meters, but arranged to indicate to one side of the zero point the amount of the charge due, and to the other side the amount of charge prepaid. There will also be a flag which will indicate when the meter is not in operation, also substantially similar to those on present meters. Coin slots will be provided, preferably for 5, 10, and 25 cent coins, possibly with a crank to register the coins as they are deposited. The essentially novel part of these meters would be three locks instead of the one now provided for collection purposes. One of these locks is designated as the parkers' lock, identical for all meters; a second is the meter lock, distinctive for each meter, and the third is the servicing lock, identical for all meters, but, of course, different from the other two.

For the occasional parker, it will be possible to operate the meter on the prepayment principle by merely depositing an appropriate number of coins and cranking them up, the amount being shown on the prepayment side of the indicator scale. The indicator then returns gradually to zero as time elapses, at a rate dependent on the number of meters in operation in the interconnected group. Those who park more than a very few times in the area in which the plan is in effect, however, will find it to their advantage to obtain from an appropriate city office a parker's key, which will be identical in notching for all parkers, but will bear stamped on the handle the license number of the particular car in conjunction with which it is to be used, or perhaps a serial number by which the person or agency responsible for its use could be identified. The key could be issued for a fee of say 25 cents plus a deposit of say $5. The fact that it had been issued might perhaps be endorsed on the vehicle license, but this may not be necessary. The parker who has such a key can then proceed to any vacant parking space, and insert his key in the lock and turn it, which will release the meter key from its lock, the meter key having been left in the meter when the space is not in use. The parker takes the meter key with him, and thus, locks his own key in the meter. While the car is parked, the meter ticks off the charge, and when the parker returns he deposits the indicated amount of money, cranking the indicator back to zero. When the indicator is back to zero, he will be able to insert the meter key and turn it in its lock, thus releasing his own key, which he takes with him to use on another occasion.

The parker's key will not be released until he has paid the charge and returned the meter key. Should the parker leave without paying the charge and recovering his key, he would, of course, forfeit some or all of his deposit. This would mean that the meter would no longer be operative until serviced. It would presumably be desirable to allow others to park free of charge in such a space until such time as the meter is serviced.

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Traffic control, parking, and parking enforcement are truly *automatic* in the city with Karpark installations. Karpark Twin-O-Matic and Unimatic parking meters, built by Herschede, makers of America's finest clocks, are engineered to be completely *flexible*—to suit your city's requirements for coin combinations and time intervals. They are *efficient*, simple to operate, highly visible, ruggedly built. And Karpark meters are *economical*, provide real savings in enforcement, maintenance and replacement.
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Unbreakable "Tenzaloy" Cast Aluminum signs. Full 6" plates with 4" raised letters, plain or reflectorized.

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Chip resistant, rust-proof PORCELAIN on ALUMINUM sign plates and frames with "Municipal's" famous 15 year guarantee.

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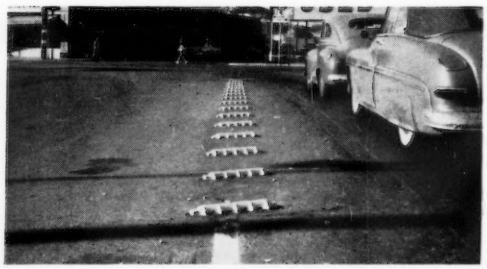
Drivers who might be tempted to cross white lines RESPECT these HIGHLY VISIBLE, JAGGED-LOOKING, RAISED barriers; "Safeti-Bars" DO THE JOB of keeping cars and trucks in the lanes where they belong. However, IF hit or crossed, they are strong enough to withstand the heaviest load impacts, and not so high as to create a hazard.

Write for Illustrated Circular

MANY USES:—"Safeti-Bars" are your "best bet" for protecting safety islands, preventing dangerous left turns, centerlining narrow bridges and tunnels, marking and channelizing parking lots, etc.

EASILY INSTALLED: — With each "Safeti-Bar," securing pins and adhesive mastic are supplied. A special reflective coating is available at slight extra cost.



HAWKINS - HAWKINS COMPANY
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To make such a system work, there would, of course, have to be periodic checks to see that where cars are parked there is either a prepayment registered or a parker's key in the lock, bearing a license number corresponding to that of the car, though perhaps the check of license numbers could be omitted most of the time. Where a parker's key is observed in the lock with either no car or a car with a different license number in the corresponding space, the servicing key may be used to unlock the meter, remove the parker's key, and remove the meter lock cylinder and replace it with a different cylinder with its meter key in place. The meter key kept by the delinquent parker will thus no longer be effective. A return of one dollar of his deposit might be offered for the return of this meter key.

While normally each key would be used only in conjunction with the car having the corresponding license number, some flexibility could be introduced by issuing with each key a placard showing the license number on the key, which placard could be placed on the inside of the window of the car when a car other than the normal one is parked with a given key. This would permit some flexibility in the accommodation of visitors and guests, and also at the time when license plates are changed.

Such a postpayment plan could, of course, be used either with meters with a preset schedule of rates or with rates controlled by the number of unoccupied spaces. With the pre-set schedule, each meter can be an independent unit, but would have to have a clock operating continuously so as to operate a cam or cams indicating the appropriate meter rate, in addition to the charging clockwork itself, which would have to be arranged to operate at different rates of speed, as indicated by the cams. Periodic winding and setting of the clock might become necessary, although arrangements might be made so that the normal amount of use of the meter would keep the clock wound as the crank is turned to register the coins.

If the rate is to be demand-controlled, ideally the preferable arrangement would be to have about twenty meters, say, connected electrically in a group, with the rate controlled for the entire group by the number of vacant spaces. Electrical interconnection would permit each meter to be placed adjacent to the corresponding parking space. This arrangement, however, is likely to involve a fairly heavy expense for the interconnecting electrical conduits, which may or may not be felt to be worth while. Probably this arrangement would be suitable primarily for areas where the demand for parking is very heavy and where a substantial capital outlay becomes justified in terms of promoting efficient utilization of the parking space.

A less expensive arrangement would be to mount the meters for a number of parking spaces together on a single standard and interconnect them mechanically, thus doing away with the need for electrical conduits. This however, imposes limits on the number of spaces that can be put in a single group: in most cases if it were attempted to mount as many as twenty meters together, parkers might have an inconveniently long way to walk in order to operate the meter, checking of parker's keys against the cars in the spaces would become more difficult, and more confusion is likely to arise as to which meter corresponds to which park-

ing space. During the summer the painting of numbers on the pavement would serve fairly well to identify the space with the corresponding meter, but when there is snow on the ground, there would be difficulty. Possibly five to seven spaces is about as many as can conveniently be controlled together on this basis. The difficulty with having this few spaces in one control is primarily that the graduation of the rates becomes too abrupt. There is hardly any justification for a charge when as many as two out of seven spaces are empty; there would thus be only two rates, a low rate where six out of seven spaces are occupied, and a high rate when all seven spaces are occupied. If the high rate is high enough so that even in periods of heavy demand there will not be an excessive amount of searching for a space, and if the low rate is low enough not to deter an undue number of potential parkers during periods of low demand, the gap may be considerable, and the results correspondingly erratic. But even so, it would seem that a degree of efficient utilization of curb parking space could be secured with this method that can hardly be approached by any other feasible method that has been proposed.

LETTERS TO THE EDITOR:

Sir: The cover of the October 1954 issue of "Traffic Engineering" has a photograph of the "Eastshore Freeway" in Oakland, California, which bears the caption "The Eastshore Freeway at San Francisco." The descriptive material on page 3 also indicates this to be a photograph looking toward downtown San Francisco.

Actually, this picture was taken from the 19th Avenue Overpass in Oakland and is looking east (away from downtown Oakland) showing the Montgomery Ward Building and the California Cotton Mills Building in East Oakland.

JOHN A. MORIN
City Engineer

Oakland, California
November 4, 1954

Sir: An interesting error has been made in connection with the titling of the cover of the October issue of "Traffic Engineering."

The portion of the Eastshore Freeway that is shown in this picture is in Oakland, California, and not in San Francisco. The view is from the 19th Avenue Overpass looking toward East Oakland and away from downtown Oakland.

The description inside the cover is correct insofar as the average daily traffic volume and accident facts are concerned.

San Francisco is approximately 16 miles from this location, as the crow flies, and the Eastshore Freeway is a freeway that is entirely on the east side of San Francisco Bay never entering the City or County of San Francisco.

J. A. CZIZEK
Traffic Engineer

Oakland, California
November 8, 1954

Touché! Our apologies for confusing the east side of the peninsula with the east shore of the bay.—Editor.

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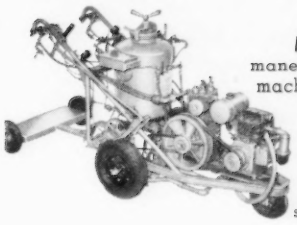

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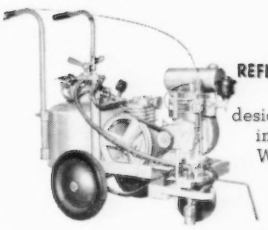

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Mrs William Armstrong

Gene Avery leaves Al Voorhees talking to himself

Dan & Gene Hammond

Kansas City Meeting Album
Chuck Wagon Dinner Snapshots
Saddle & Sirloin Club - Sept 28 1954
Snapped by Ed Mueller

Joe Marlowe gets the real inside scoop from Ted Watson

The Midwest Section holds a rump session Dan Hanson, Dick Kanak Ellis Olmstead and Dick Walton

TRAFFIC NEWS

ANNUAL ITE MEETING REPORTS

Master of Ceremonies, Joseph J. Feuchter and Dr. Alfred P. Haake, principal speaker are pictured at Annual Banquet head table.

Report of Old Board of Direction Meeting September 26-27, 1954 Kansas City, Missouri

The vigorous growth and development of the ITE is reflected in the heavy schedule of business which was transacted at this meeting of the Board of Direction. Action was taken on over 20 items on a crowded agenda requiring over 12 hours of deliberation at the time of the 25th Annual Meeting in Kansas City in September 1954. Among the more important items covered were: the incorporation of the Institute, Local Section Activities, Membership Changes, Policies on conduct of Annual Meetings, and improvements in Technical Council work and organization.

Incorporation of Institute

At this last meeting of the Board of Direction under the chairmanship of President McNeil, the following resolution was adopted:

WHEREAS, Institute of Traffic Engineers, Incorporated, has been duly incorporated under the laws of the State of Connecticut for the same purposes for which this association has been formed; and

WHEREAS, the Constitution and By-Laws of this association have been adopted as the Constitution and By-Laws of the Institute of Traffic Engineers, Incorporated; and

WHEREAS, the Officers and Directors of this association have been elected Officers and Directors of the Institute of Traffic Engineers, Incorporated; and

WHEREAS, all of the members in their respective grades of this association have been elected members at the same grade of Institute of Traffic fic Engineers, Incorporated;

Now, therefore, it is

VOTED: to transfer all of the membership, assets and liabilities of this association to Institute of Traffic Engineers, Incorporated; and to dissolve Institute of Traffic Engineers (A voluntary association) *subject to an affirmative vote of the membership* in Annual Meeting assembled September 27, 1954.

This action was later confirmed by the Institute as a whole at the Annual Meeting.

Subsequent to the adoption of this resolution there were several supplementary actions required. These had to deal with the authorization of officers in conducting the financial business of the Institute with the Chase National Bank of New York City, which was designated as the financial depository of ITE funds.

Local Sections

Early in the meeting attention was turned to the importance of the local Sections in maintaining the vigor and growth of the Institute. It was generally recognized that the strength of the Institute has its foundations in the local Sections and to this end consideration was given to the need for additional staff to help keep the headquarters in closer contact with the local Sections. It was further agreed that the local Sections should take an active part in the nominations of national officers for the Institute. Each year three new directors are elected by their respective districts. Our Executive Secretary is now under instructions to advise all local Section officers resident in such districts to solicit the membership for nomination suggestions which must be filed with the Nominating Committee by early January.

Secretarial Reports

The report of the Secretary-Treasurer was given and is set forth in the report of the Annual Meeting. The report of the Executive Secretary covered questions concerning personnel at headquarters and developed the need for additional staff as discussed at the Annual Meeting of the Institute.

As required in the By-Laws a review was made of the 6 district boundaries. Discussion on this subject indicated no desirable changes at this time, and existing boundaries were re-confirmed for the coming year of 1955.

Action On Membership

Mr. Todd reported that prior to this meeting the membership totaled 808 members, comprised of 190 Juniors, 325 Associates, 253 Members, 32 affiliates

Mr. James M. Kemper (center) after presenting the Kansas City Businessman's viewpoint on traffic listens intently as one of the audience raises a question; Leslie J. Sorenson who presided over session (left) and Wilbur S. Smith who also presented a paper, are interested observers.

and 8 honorary members. There are also 15 sustaining organization. At this meeting of the Board, the resignations of a Member and a Junior were accepted; the transfers of 3 Associates to Member and 5 Juniors to Associate were approved. The Board elected to membership 1 new Member, 7 new Associates and 14 new Juniors and 6 invitations were authorized to new sustaining organizations.

Annual Meetings

Considerable discussion and deliberation was given to a report of the Director's Committee on the conduct of annual meetings. The following policy was adopted regarding site of meeting:

1) Annual Meetings will be rotated among the 6 districts.
2) The membership within the district where the annual meeting is to be held, will recommend the specific city.
3) No district will be compelled to accept the assignment of an annual meeting.

It was generally agreed by the Board that increased emphasis must be given to the improvement of technical sessions. Further deliberation will be given by the next Board to policies concerning technical sessions and early action on this matter is anticipated.

In order to control the expenses incurred by the annual meeting a typical and illustrative expense budget was adopted in principal.

The matter of funds required to conduct an annual meeting was recognized as being very important by the Board. In accordance with the policies adopted, the Board voted the establishment of an Annual Meeting Revolving Fund of $2500.00 to be drawn from national funds. Any additional subsidy necessary, is to be obtained locally in the district and *without solicitation of Sustaining Organizations*. A further policy was adopted which bans formal commercial exhibits or displays by manufacturers of sales organizations.

A committee on site selection for the 1956 annual meeting was appointed by President McNeil to consider the invitations of those interested in the 1956 meeting.

Because of objections to the size of the official ITE lapel pin a smaller design eliminating the gold perimeter was authorized and will be available to the membership early in 1955. Orders will be handled by Headquarters Office.

Technical Council Reports

Mr. Henry K. Evans, Secretary of the Technical Council, rendered a brief report on the activities of the council during the past year. In reviewing the work of the council the members of the board appreciated fully the efforts and contributions currently being made through the Technical Council toward the objectives of the ITE. Among the many important matters under consideration final action was taken on two important items:

1) The Board voted that the Institute now approves all 36 proposals of the joint committee for revision of the Uniform Manual. (These were published in the May 1954 issue of TRAFFIC ENGINEERING.)
2) The Rules of Procedure for the conduct of its business which had been prepared by the Joint Committee on Uniform Traffic Control Devices, were amended slightly and approved.

Other Matters Considered

Among other matters considered at this Board Meeting were developments in the field of traffic education including in-service training matters. The reports on the technical notebook and its progress were received with satisfaction. Minor changes in the traffic engineering award plaque were suggested. The Board authorized the preparation and issuance of a brief brochure setting forth the position and purposes of the Institute in the field of traffic engineering.

City Manager L. P. Cookingham (standing) welcomes registrants to Kansas City at kickoff luncheon as (left to right) K. C. Councilman Robert J. Benson, ITE President Donald M. McNeil, and General Chairman Gerald H. Frieling listen.

(Left to right) Charlie Murphy, Hank Barnes, and Wally Braun reminisce on the joys of city traffic engineering.

Report of Meeting of New Board of Direction, September 29th

At the meeting of the new Board on September 29th under the presidency of Harry Porter, Jr., the old Board members extended their welcome to the new directors, expressed their deep admiration and appreciation to retiring President McNeil and pledged themselves anew under the chairmanship of Harry Porter.

For the benefit of the new members of the Board a brief review of the last Board meeting was undertaken.

The new Board particularly appreciated the invitation of the western section to hold the spring meeting of the Board in San Diego, California.

In order that the membership may become familiar with the details of the director's committee on the conduct of the annual meeting, the Executive Secretary was directed to publish this report in an early issue of TRAFFIC ENGINEERING.

The Board voted approval for public release of a statement prepared by technical committee 1C entitled Careers in Traffic Engineering, after minor editorial revisions are made.

There were several resolutions published elsewhere in this issue of TRAFFIC ENGINEERING, which were formerly approved by the Board of Direction and adopted later at the final meeting of the Institute.

As recommended by the Site Selection Committee San Francisco was chosen as the site of the 1956 meeting of the Institute. District 3 was designated as the site of the 1957 annual meeting and District 5 was invited to undertake the 1958 meeting. In accordance with policy these districts, if they decide to undertake the annual conventions of 1957 and 1958 respectively, will recommend the city in which such convention would be held.

After some deliberation and pertinent details the Board decided that the next annual meeting will be held at the William Penn Hotel, Pittsburgh, Pennsylvania, on October 23-27, 1955.

Technical Committees

A preliminary roster of technical committees was published following the precedent established last year. In this connection an important change was adopted by the Board. Because of the undue size of department 3 decision was made to divide this department thereby forming 2 departments or establishing a total of 7 technical departments in the technical division. Department 3 is now re-named "Traffic Control Operation Devices," and includes committees 3B, 3D, 3G, 3H, 3K and 3L. The new department 4 will include former committees now designated as 4A, 4C, 4E, 4M, 4N, 4O and 4Q. All committees formerly under department 4 were transferred to the new department 7 which is concerned with "Design of Equipment."

All the former presidents of the Institute were invited into an informal session of this first meeting of the 1955 Board. Numerous matters were discussed freely and in an informal way and the Board deeply appreciated the continued interest and advice of the "old timers."

It was decided that the next meeting of the Board will be held in Washington, D. C., at the time of the Highway Research Board meeting. A heavy docket is anticipated and 2 full days of meeting have been called for.

Four nice people from Baltimore — the John (Les) Mintiens (seated) and the George N. Lewis Jr., couple (standing). Messrs. Lewis and Mintiens are engineers for the Maryland State Roads Commission.

Report on Annual Business Meeting

September 27, 1954

Muehlebach Hotel, Kansas City, Mo.
PRESIDING—Mr. Donald M. McNeil —President.

Approximately 250 members present.

Tribute to Deceased Members

President McNeil opened the meeting by pointing out that the first order of business was to pause in memory of those who could not be present with us. He reported the deaths of:

Member F. M. Carter, born October 29, 1886, died May 1, 1954.

Associate Member Tracy D. LaMay, born June 5, 1884, died July 27, 1954.

Associate Member Wilbur H. Miller, born August 25, 1916, died June 18, 1954.

Associate Member R. Wayne Morris, born April 5, 1909, died December 7, 1953.

Member Harry E. Neal, born 1884, died February 15, 1954.

Member T. Elmer Transeau, born January 1, 1891, died April 10, 1954.

Associate Member Grant E. Williams, born April 25, 1895, died May 3, 1954.

Incorporation of Institute of Traffic Engineers

The President called on Secretary-Treasurer Matson to review the actions to incorporate the Institute that had taken place. Mr. Matson reported the steps which had been taken and advised that in accordance with the advice of our legal counsel, he proposed the adoption of a resolution confirming the actions of the Board.

Mr. Ristroph moved adoption of the resolution which was seconded by several. Mr. Sorenson requested one of the officers to explain the advantages of incorporation. Mr. Matson made a brief explanation. Mr. Marsh suggested amending the wording to indicate that the membership had been elected to similar grades of membership held in the voluntary association. It was pointed out to him that the incorporators had already taken such action in organizing the corporation. Mr. Berry suggested that the Constitution and By-Laws of the Institute of Traffic Engineers (a voluntary association) should be the Constitution and By-Laws under which the Institute of Traffic Engineers, Incorporated, is to operate. It was pointed out that this had been done already but it was agreed that a statement to this effect might well be included in the preamble of the resolution.

Following further discussion the members present VOTED the following resolution:

WHEREAS, Institute of Traffic Engineers, Incorporated, has been duly incorporated under the laws of the State of Connecticut; and

WHEREAS, the Constitution and By-Laws of this association have been adopted as the Constitution and By-Laws of Institute of Traffic Engineers, Incorporated; and

WHEREAS, all Officers and Directors of this Association have been elected Officers and Directors of Institute of Traffic Engineers, Incorporated; and

WHEREAS, all of the members in their respective grades of Institute of Traffic Engineers (a voluntary association) have been elected members at the same grade of Institute of Traffic Engineers, Incorporated; and

WHEREAS, the Board of Direction of this association voted to transfer all of its membership, assets and liabilities to Institute of Traffic Engineers, Incorporated, and to dissolve this association subject to confirmative action by the membership;

Now, therefore, be it

RESOLVED to ratify and confirm the vote of the Board of Direction of this association to transfer all of its membership, assets and liabilities to Institute of Traffic Engineers, Incorporated, and to dissolve Institute of Traffic Engineers, a voluntary association.

Report of Secretary-Treasurer

Secretary-Treasurer Theodore M. Matson presented a report covering the financial condition of the Institute. Highlights of the report are as follows:

(a) There was a slight net gain in revenues over expenditures during the fiscal and calendar year ending December 31, 1954, amounting to $340.45.

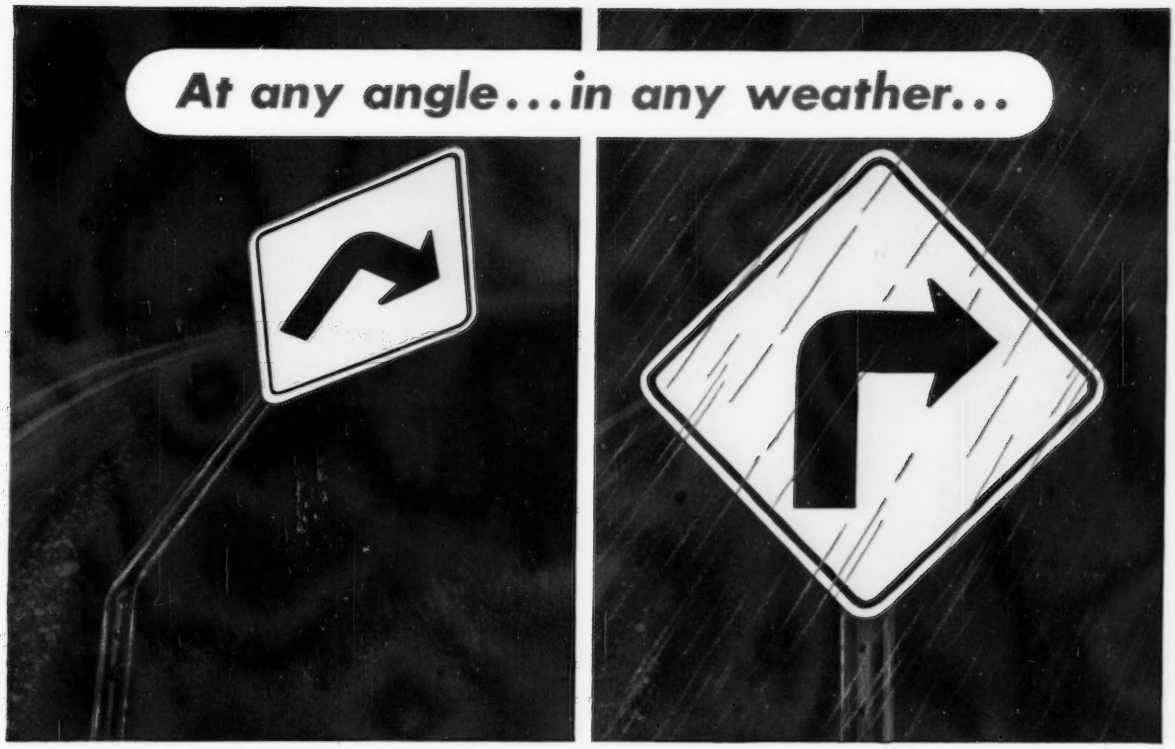
(b) The net worth of the Institute on January 1, 1954, was $16,580.56.

(c) During the first eight months of 1954, total revenues have exceeded expenses by $4,756.96.

Report of Executive Secretary

The Executive Secretary submitted a written report covering the operations of Headquarters during the administrative year (published in last month's Secretary's Column).

(Left to right) Charlie Dernbach, Bill Derrick, Fenton (Jughead) Jordan, Bill Miles, Nancy and Joe Nadon enjoy a "goof" in operations.



Wide-Angle Flat-Top SCOTCHLITE REFLECTIVE SHEETING gives full reflectorization

In this day of increasing traffic speeds, traffic engineers everywhere are turning to the problem of getting better nighttime visibility on their regulatory and warning signs. But despite their best efforts, accidents do happen that can bend or twist a vital sign. It does rain—and visibility is reduced. Fortunately, as more and more traffic engineers are discovering, there is an answer: with Wide-Angle Flat-Top "Scotchlite" Reflective Sheeting, highway signs show their *true color*, *true shape*, and *true legend* with the same accuracy at night as they do by day . . . in foul weather as well as fair . . . even when accidental damage or vandalism changes the angle of the sign face to the roadway.

For instance, even under extremely heavy rain conditions, there is no significant loss of brightness from signs of "Scotchlite" Reflective Sheeting. And, because of the wide angularity of the "Scotchlite" Sheeting, a sign will continue to reflect even when turned or bent to extreme angles.

Add to these reasons ease of maintenance, and you'll quickly see why so many traffic engineers in states, counties, and cities have standardized on signs made with Wide-Angle Flat-Top "Scotchlite" Reflective Sheeting.

Why not let us send you complete information? Just write: Dept. TE-114, Minnesota Mining and Mfg. Co., St. Paul 6, Minn.

EASY TO MAINTAIN—*"Scotchlite" Reflective Sheeting can usually be restored to full brilliance with just an ordinary soap and water washing. Stubborn wax or tar can be removed with kerosene —no need to resurface the sign. Even punctures and vandal damage can be repaired in the field without unmounting the sign.*

For true shape ... true color ... and true legend ... by night as well as by day

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SCOTCHLITE BRAND REFLECTIVE SHEETING

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Mrs. Tony Basile (left) and Mrs. Jerome Franklin worry when Ted Siegel routes two locomotives through their switches. Bill Miles (standing) and Charlie Dernback (extreme right) are the kibitzers. Visible in background are (left to right) Matt Sielski, Al Head, Bryan Wilson (partly obscured by mirrored pillar) and Bob Burch.

Reports of Committees

Administrative Division — President McNeil introduced Vice-President Charles W. Prisk to present a report for the Administrative Division. Mr. Prisk commented that the activities of most of his committees had already been reported by the President and Executive Secretary. He complimented in strong terms the work of the Annual Meeting Committees in arranging for the comfort and entertainment of this gathering and commented briefly on the work of the Nominating Committee, Membership Committee and the project of the Ways and Means Committee. He introduced Mr. Robert S. Holmes, Chairman of the Committee on New Members, who presented a final report (published elsewhere in this issue) on the accomplishments of his committee during its two-year existence. Mr. Holmes spoke highly of the accomplishments of the Missouri Valley, Texas and Western Sections in generating new member interest.

Technical Division — President McNeil introduced Vice-President Harry Porter, Jr., in charge of the Technical Division. Mr. Porter first introduced the editor of the Technical Notebook, Mr. Stanley Siegel, who presented a report on the status of the Notebook (published elsewhere in this issue).

Mr. Porter then called on Mr. Henry K. Evans, Secretary of the Technical Council, to present a report on the work of the Technical Division during the administrative year (also published elsewhere in this issue).

Proposed Amendment to By-Laws, Article IV, Section 2

Secretary-Treasurer Matson reported the resolution adopted by the Board of Direction in June 1954 proposing an increase in annual dues. Mr. Matson read the proposed amendment and the President invited discussion on the matter. Messrs. Hurd, Stewart and Ewart discussed the matter briefly. Mr. Cherniack moved that the proposed $2.50 increase be made $5.00 in all grades of membership. The motion, being duly seconded, was put to vote and the proposed amendment was rejected.

Upon motion of Mr. Robert A. Mitchell, the membership VOTED to approve the proposed amendment in the form recommended by the Board and approved submission of the amendment in unamended form to the qualified voters for ballot.

Report of Election Tellers

Mr. Louis E. Bender, Chairman of the Election Tellers, reported for his committee the results of their canvass of the 356 ballots cast by qualified voters. President McNeil declared the following members duly elected:

Officers:
Harry Porter, Jr., President.
Theodore M. Matson, Vice-President.
Charles W. Prisk, Vice-President.
J. Carl McMonagle—Secretary-Treasurer.
Directors:
Alger F. Malo, Director, District 3.
Karl A. Bevins, Director, District 5.
Joseph E. Havenner, Director, District 6.

Installation of Officers

Mr. McNeil requested all of the newly-elected officers who were not already on the platform to come forward, and then presented the gavel to the new President with his congratulations on being elected to begin a new useful and most satisfying experience. Mr. Porter extended his personal thanks for the confidence of the membership in electing him President, asked the help of every member and pledged his best efforts in expanding and improving the Institute. He then introduced the new Officers and Directors.

Adjournment

There being no further business at this time the meeting was adjourned at 4:12 P.M., September 27, 1954.

Annual Report of Committee on New Members

As announced to you at this meeting a year ago, your Committee on New Members was formally activated on April 11, 1952. We launched the "new member" campaign at the Annual Business Meeting in Chicago late that year. Our announced goal at that time was an increase to 1,000 members, starting from a total of 677.

Although a *goal* was established, it was the unannounced consensus of opinion of the committee that we would "hitch our wagon" to that star, but set as our secret quota approximately two-thirds achievement in a two-year period—or 215 new members. We were naturally quite pleased with the success achieved the first year—of 103 new members, an all-time record for new candidates *elected* to membership in one year.

Now, let us review the record for our second and *final* year of the campaign. We got off to a slow start, and by the end of the second Board Meeting for the year in June, 1954, had accounted for only 55 new members. However, the "Gold Rush" started in August and 56 applications for new membership have been filed at ITE Headquarters to date. It is, of course, an impossible task for your Membership Committee and the Board of Direction to *process* these late applications in so short a time.

However, in the submittal of this final report we have included all of these applications as our "record of achievement" for the 1953-54 Institute year, for a grand total of 112 new members and *prospective* new members. Of this number 76 have been elected to membership by the Board of Direction (including 20 yesterday), and the balance of 36 are in process. Obviously, these latter applications on file are a direct result of the combined efforts of your Committee on New Members, the Local Sections that "pushed" the campaign and individual members.

As you can readily see, we are not too far off the "secret quota" established by your committee. Of 215 estimated new members, we have gained approximately 214 in a two-year campaign. At this time I would like to report to those members who were somewhat critical of a "membership campaign," in that *un*qualified candidates might be induced to file application, that less than five (5%) per cent of the total applications submitted were rejected by your Membership Committee and the Board of Direction.

The Institute's Local Sections were

1952 - 1954 RECORD

Section	*Committee Sponsor*	*Quota*	*New Members*	*Achievement (%)*
Canadian	Philippe Ewart	10	9	90*
Indiana	W. F. Milner	10	5	50
Michigan	S. J. Levine	30	15	50
Mid-West	R. F. Gross	45	19	42
Missouri Valley	J. J. Feuchter	10	17	170****
New England	M. A. Kaehrle	30	20	67*
New York	T. J. Fratar	40	28	70*
*Southern	P. L. Ristroph	50	29	58
**Texas	P. L. Ristroph	10	10	100***
Washington, D. C.	J. B. Ecker	40	8	20
Western	W. E. DeYoung	70	54	77*
		***345		

*Activated October 1, 1953.
**Activated January 11, 1954.
***Original Quota 323.

East Coast folks get together in Headquarters Room. (Left to right) Herb Klar, Janet Leonard, Jack Leonard, Larry Lawton, Mildred and Roger Chandler.

Mr. and Mrs. John Comiskey, Jr., of Philadelphia, in Headquarters Room after banquet.

the real *key* to the entire campaign. Some were more active than others. Herewith is the detailed accounting of achievement by Sections, indication of our Committee Sponsor, the original established quota and the degree of attainment.

All Local Sections are to be commended for their fine performance. Special recognition should be given to the Canadian, Missouri Valley, New York, Texas and Western and New England Sections for meeting their assigned quota for the two-year period. Cognizance must also be made of the remarkable record of our *newest* Texas Section in the short period of only nine months.

It is the considered opinion of your committee that a "campaign" should close on schedule and not suffer a gradual "fade-out" over an extended period of time. The Chairman, therefore, formally presented this report to the Board of Direction yesterday and requested that your Committee on New Members be officially inactivated at the conclusion of this report today. This request has been granted.

However, we want the membership to understand that this does not *conclude* all efforts to interest qualified candidates for membership. Actually, the groundwork has been laid with each Local Section to continue this campaign unofficially, on a permanent basis. We are pleased to announce that each Local Section has activated a continuing Committee on New Members within the framework of their own organization. Due to our excellent *coverage* in all but *five* of the 48 States, we can be assured of a continuing effort to promulgate the aims and objectives of the National Committee.

In closing, your Chairman would like to pay special tribute to the individual members of the committee who offered their loyal support to the Chairman in organizing and conducting the campaign over a period of 30 months. Appreciation is also extended to the Presidents of the Local Sections, the Membership Committee, the Board of Direction and all of the individual members who actively participated in the campaign.

Respectfully submitted,
ROBERT S. HOLMES
September 27, 1954. *Chairman*

Annual Report on Traffic Engineer's Technical Notebook

In order to maintain a convenient reference volume containing information of continuous use to the practicing traffic engineer, periodic supplements have been sent to all Notebook owners. These supplements have been composed of revisions of material already in the Notebook, reports or summaries of reports of ITE technical committees approved by the Technical Council, and new reference material.

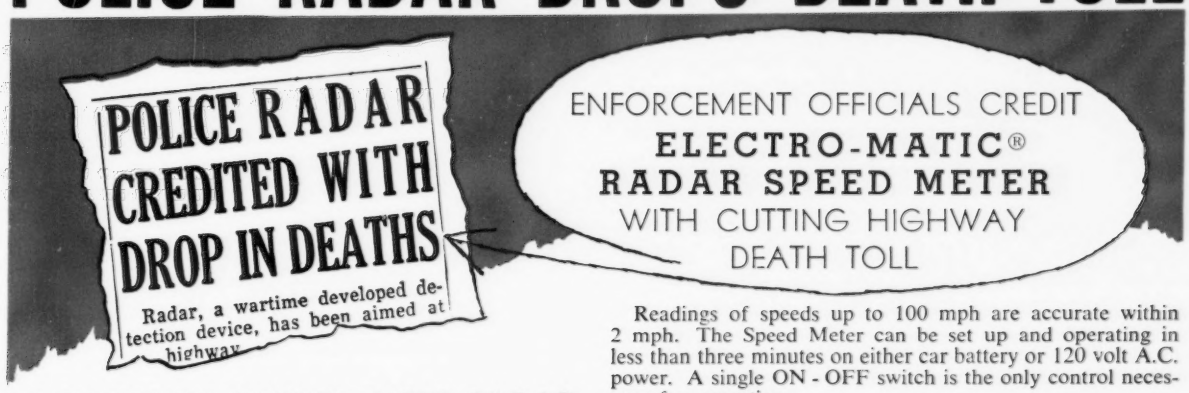
Supplements were mailed on September 21, 1953; April 16, 1954; and September 8, 1954. Beginning with the April mailing, a production schedule was outlined involving three proposed supplements each year. Designated as Spring, Fall, and Winter, target dates of April 15, August 15, and December 15, have been set up. It is proposed to continue this schedule during the coming year.

The first supplement was sent to all Notebook owners — approximately 500 persons — with a request that they subscribe $1.00 to receive supplements for the current year. A subscription solicitation letter was sent to the same people about two months later. The Spring supplement was also sent to all these people, whether they had subscribed or not. The Fall supplement was sent only to those who had subscribed—approximately 300. A follow-up letter will be sent to all those who own Notebooks and have not subscribed.

Several persons have expressed a desire to obtain supplements even though they are not Notebook owners. Since about 40 sets of each of the three supplements are on hand, it is proposed to make them available for the subscription price through TRAFFIC ENGINEERING Magazine. It is hoped this procedure will add to our number of subscribers and also give some indication of the demand for reprinting the Notebook.

During the coming year it is planned to investigate the possibility of the supplements being issued to ITE members as a membership service. Preliminary discussions have indicated the feasibility of such a plan, but many details must be worked out before a definite recommendation can be made. Also during the coming year, special attention will be paid to Section G, Facts and Figures.

POLICE RADAR DROPS DEATH TOLL


POLICE RADAR CREDITED WITH DROP IN DEATHS
Radar, a wartime developed detection device, has been aimed at highway
ENFORCEMENT OFFICIALS CREDIT
ELECTRO-MATIC®
RADAR SPEED METER
WITH CUTTING HIGHWAY
DEATH TOLL

NATIONWIDE SURVEY CITES RADAR

Most reports from states using Electro-Matic Radar Speed Meter say it's cutting down accidents. The latest state to install it and the state which pioneered radar's use in patrolling highways are equally enthusiastic about the results, an Associated Press survey found.

Virginia State Police, one of the first users of radar, in an expanded program credit radar for the reduction in the death toll on the Fourth of July weekend. There were only 7 deaths this year compared to 21 last year.

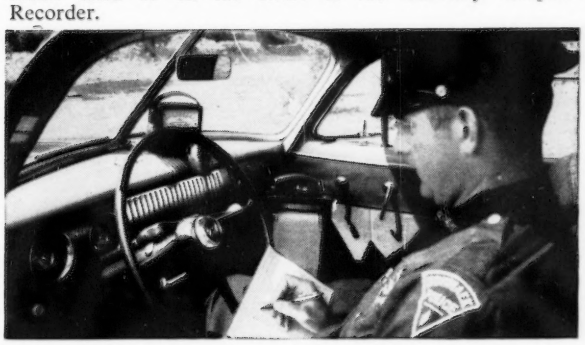
Radar Speed Meters have been used for a year by the

Kansas highway patrol. They note a 12 per cent reduction in traffic fatalities and conservatively say radar "may have played some part."

Mississippi State Police credit radar with a 77 per cent reduction in traffic accidents.

HOW THE SPEED METER WORKS

Continuous speed measurements of vehicles approaching or receding in the path of a radar beam are taken directly with the Model S-2 Speed Meter. Speed readings are plainly and directly indicated in miles per hour, day or night and under all weather conditions, on the illuminated meter scale or on the chart of the auxiliary Graphic Recorder.



Readings of speeds up to 100 mph are accurate within 2 mph. The Speed Meter can be set up and operating in less than three minutes on either car battery or 120 volt A.C. power. A single ON - OFF switch is the only control necessary for operation.

Either one-man or two-man usage of the S-2 Speed Meter is practical. Under the one-man system the Transmitter -

Receiver Unit is connected by a small cable to the Indicator Unit at the point down the road where the officer is stationed. Departments that favor two-man usage utilize two cars, the first car mounts the Radar Speed Meter and is in radio-telephone communication with the intercepting car at a suitable location down the road.

MANY ADVANTAGES OFFERED

1. Police can check far more vehicles than with a cruiser car.
2. Hazards to pursuing officers and motorists are eliminated.
3. It is effective day and night and in all weather.
4. Psychological deterrent to would-be speeders.
5. Portable for spot checking.
6. Ideal for investigating complaints of neighborhood speeding.
7. Either one-man or two-man usage of the Speed Meter can be employed.

For full details write for Bulletin R-102 to

TRAFFIC ACTUATED ®

AUTOMATIC SIGNAL DIVISION

EASTERN INDUSTRIES, INCORPORATED
NORWALK • CONNECTICUT

Cost Summary:

Fall Supplement, 1953	$138.10
Subscription Solicitation letter	13.00
Spring Supplement, 1954	89.60
Fall Supplement, 1954	73.40
Total	$314.10
Cash received from 302 Subscriptions	$302.00
Deficit	$ 12.10

This deficit will be made up from subscriptions received for the ensuing year. The subscription plan worked pretty well and it is proposed to continue it again next year.

Special thanks are due to Bob Allen and the Association of Casualty and Surety Companies for their excellent cooperation in the actual reproduction and distribution of the supplements.

Respectfully submitted,

STANLEY T. SIEGEL, *Editor*
Traffic Engineer's Technical Notebook

Report of Technical Council for the Year 1953-54

Meetings of the Council were held on January 10, 1954 in Washington, D. C.; on June 16, 1954, in Dearborn, Michigan; and on September 25, 1954, at Kansas City, Missouri.

Thirty committees have been actively engaged in preparing reports. Nine have been inactive. Seven committees have submitted 8 reports for council consideration. Five of these were approved plus three more submitted at our Buffalo meeting of September 28, 1953.

Approved reports are:

1C "Careers on Traffic Engineering"
1F "Annual Inventory of T. E. Activities" questionnaire
3I "Truck Loading Zones"
3M "Proper Location of Bus Stops"
3P "Traffic Study Techniques"
4C "Cold Cathode Tube Interior Illum. Signs"
4C "Intermittent Traffic Control Neon Sign"
4G "A Graphical Representation of Pedestrian and Vehicular Traffic at a Street Crossing"

The first four reports, 1C, 1F, 3I, and 3M, have been referred to the Board, which has approved all but the 1C report as official ITE statements.

The 1C report, "Careers in Traffic Engineering," is intended for duplication in pamphlet form for high school students and B'nai B'rith has offered to print and distribute approximately 50,000 copies of such a pamphlet.

Reports 3I and 4G have become supplements to the ITE Technical Notebook, report 3P was printed in the T. E. magazine, 3M and 4C reports are destined for the next Notebook supplement and 1F report was used as the basis for the National Safety Council Inventory Form.

Comparing the Technical Division's Activities this year and last: We had 30 active committees this year, 25 last year. They submitted eight reports for consideration this year, 11 last year. There were 9 inactive committees this year, 14 last year. Reports approved this year —5, last year—6.

Technical Notebook owners received their first supplement last year and two supplements this year, including four technical committee reports. It is planned to issue three supplements each year, including therein the complete or condensed reports of technical committees where such reports have been approved by the Council for publication. (Where the report is in the form of a policy, standard, or recommendation, of course it must have Board approval before publication anywhere.)

The Council reviewed and made recommendations to the Board of Directors on 36 proposals of the Joint Committee for Changes in the Manual on Uniform Traffic Control Devices (communications received from ITE members concerning needed changes were reviewed by the Council.)

The Council, in cooperation with J. E. Johnston, Chairman of the Annual Meeting Technical Sessions Committee, developed the format and outline of the four technical sessions for the 1954 Annual ITE Meeting.

Brief summaries of committee activity follow:

Department 1, Traffic Engineering Administration
(J. E. Havenner, Head)

Committee 1A. *Organization and Functions of State and City Traffic Engineering Departments.* Active during year and plans to present a report to Council at September, 1954 meeting.

Committee 1C. *What Traffic Engineering Is and What Traffic Engineers Do.* Has prepared and received Council approval of a report "Careers in Traffic Engineering" which is being considered by Board of Direction. B'nai B'rith is printing approximately 50,000 copies of this for distribution to students. ITE name will go on the booklet if Board approves.

Committee 1F. *Annual Inventory of Traffic Engineering Activities.* Report approved by Council at January 1954 meeting, approved at June Board meeting. It serves as basis for annual inventory conducted by National Safety Council with cooperation of ITE.

Committee 1H. *Traffic Engineering Definitions.* Inactive. Chairman resigned during year.

Committee 1I. *How to Handle Traffic Complaints.* Apparently some work done, since Committee Chairman reported that a progress report would be presented at September 1954 Annual Meeting.

Department 2, Professional Standards and Education for Traffic Engineers
(N. Kennedy, Head)

Committee 2A. *Professional Registration.* A revision of a 1951 report, prepared by an ITE committee but never officially approved, has been submitted to the Council for consideration at the September 1954 meeting. This incorporates the views of the National Council of State Boards of Engineering Registration.

Committee 2B. *Civil Service Requirements for Traffic Engineering Positions.* Some work done relative to traffic engineering questions for various grades of positions.

Committee 2C. *Philosophy and Principles of Traffic Engineering.* Some progress toward developing a statement.

Department 3, Traffic Control Operations (M. Sielksi, Head)

Committee 3A. *Policies on One-Way Streets.* Inactive.

Committee 3B. *Warrants for and Experience with Pedestrian Intervals at Signalized Intersections.* Inactive.

Committee 3C. *School Crossing Protection.* Council had asked Committee to condense and make changes in Committee report presented at 1953 Annual Meeting. Revised report submitted but referred back again to Committee for further work.

Committee 3D. *Warrants For and Experiences With Yield Signs.* Report transmitted to Council for consideration at September 1954 meeting. Incidentally, the trapezoidal shape of the sign recommended in this report disagrees with that recommended by the Joint Committee on Traffic Control Devices.

Committee 3E. *Warrants for Speed Zones.* Two subcommittees working on rural and urban aspects. Committee meeting planned at Kansas City.

Committee 3G. *Parking Meters.* Committee revising report originally presented to Council last year and returned for further work.

Committee 3H. *Street and Highway Lighting.* Progress report submitted. Committee now studying effects of street lights on accidents. Committee meeting planned at Kansas City.

Committee 3I. *Truck Loading Zones.* Report approved by Council and Board during year and printed in Reference Notebook. Committee discharged.

Committee 3K. *Warrants for Four-Way Stops.* Inactive.

Committee 3L. *Warrants for Pedestrian Refuge Islands.* Progress report submitted and much work has been done toward developing a final report.

Committee 3M. *Transit Traffic.* This was formerly called "Proper Location for Bus Stops" Committee. Report under that title approved at last Annual Meeting and subsequently by The Board. Committee meeting planned at Kansas City.

Committee 3N. *Special Routes for Commercial Vehicles.* Report submitted last year was returned for further work by Council. Committee inactive this year.

Committee 3O. *Warrants for Off Center Lane Movement.* Progress report submitted in March. Committee meeting planned for Kansas City.

Committee 3P. *Warrants for Peak Hour Parking Prohibition.* This Committee under former title of "Development of Traffic Study Techniques" submitted report approved at September 1953 meeting and published in T. E. magazine in December. Committee making progress under new title.

Department 4, Design of Equipment
(Lloyd Braff, Head)

Committee 4A. *Traffic Signals.* Committee studying "North American Traffic Emergency Control System" and will eventually make recommendations. Also studying possible standards for color codes in traffic signal cables.

Committee 4B. *Study of Reflectorized Signs.* Inactive.

Committee 4C. *Sign Illumination Techniques.* Two progress reports submitted and approved by Council for publication in Reference Notebook, entitled "Cold Cathode Tube Interior Illuminated Sign" and "Intermittent Traffic Control Neon Sign." Committee plans to develop further studies of this nature. Several years in the future it is the intention to develop actual standards. Committee meeting planned for Kansas City.

Committee 4D. *Paint and Bead Specifications.* Progress report submitted.

Committee 4F. *Design of Signs and Markings.* Committee active in developing a standard on pavement markings and studying railroad watchman's sign design.

Committee 4G. *Traffic Survey Devices.* Very active. A report on graphical representation of vehicular and pedestrian intersection traffic was approved and has been printed in the Reference Notebook. Committee now working on transit time studies.

Department 5, Planning and Geometric Design of Traffic and Pedestrian Ways
(A. F. Malo, Head)

Committee 5A. *Design Criteria for Urban Expressways.* Analyzing data on 24 expressways.

Committee 5B. *Channelization Designs.* Inactive.

Committee 5C. *Uphill Traffic Lanes.* Studying warrants, design features, and controls. Report expected in January, 1955.

Committee 5D. *Medians in Urban Areas.* Working on accident experience before and after adding medians.

Committee 5E. *Driveway or Curb Cut Permits and Design.* Inactive.

Committee 5F. *Design of Safety Curb and Center Line Devices.* Preparing booklet of curb designs.

Department 6, Planning and Geometric Design of Terminal Facilities
(E. R. Ricker, Head)

Committee 6A. *Parking Garages.* Committee working with special review committee of Automobile Manufacturers Association to develop agreement on automobile dimensions affecting garage design.

Committee 6B. *Truck Terminals.* Working on factors necessary for selection of truck terminal sites.

Committee 6C. *Bus Terminals.* Has subcommittees at work on different phases, such as planning and location and warrants for off-street terminals. A report approved by Council in 1953 was printed in Reference Notebook this year.

Committee 6D. *Airports.* Inactive. A report approved by Council in 1953

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WHY TRAFFICONESYSTEM IS PREFERRED BY SAFETY MINDED TRAFFIC ENGINEERS

- 36-page Traffic Manual goes into every phase of traffic problems.
- Tested and approved through years of experience in the laboratory and in the field.
- Selected by traffic engineers for the toughest traffic control tests.
- Saves money by eliminating the rebuilding of old fashioned wood and wire markers.

FACTS ABOUT TRAFFICONES

- Two sizes
  28" — Barricade
  18" — Channel
- Colors
  Red, yellow, black.
- Lightweight and portable.
- Lane channeling set up in one-tenth the time required with wooden and wire markers.
- Require minimum storage space.
- They stack.
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don't confuse him

Please write for complete information on how to increase the effectiveness of your traffic controls. 36-page manual and colorful literature available.

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was printed in Reference Notebook this year.

Committee 6E. *Policy on Curb Parking.* New committee just getting started.

HENRY K. EVANS
September 27, 1954 *Secretary*

Annual Meeting Resolutions

The following Resolutions prepared by the special Committee on Resolutions were approved by the Board and adopted by the membership at the closing luncheon:

Resolution No. 1

WHEREAS, the accommodation and entertainment of delegates and guests to the 25th Annual Meeting of the Institute of Traffic Engineers have been very enjoyable, and

WHEREAS, the program of professional and technical meetings and papers has been stimulating and impressive in the achievement of the objectives of the Institute of Traffic Engineers, and

WHEREAS, the patient, thorough, and loyal efforts required for the organization, planning, arranging, and conducting of this 25th Annual Meeting under unusually trying circumstances were recognized as outstanding.

BE IT RESOLVED, that the Institute of Traffic Engineers express its profound gratitude and appreciation to General Chairman, G. H. Frieling and his associates of the Local Arrangements Committees; and

BE IT RESOLVED, that Members in attendance at the 25th Annual Meeting of the Institute of Traffic Engineers, extend sincere appreciation to our many friends for their valuable services and contributions to the success of this Annual Meeting; and

BE IT FURTHER RESOLVED, that the members of Institute of Traffic Engineers extend their deep appreciation to Mrs. G. H. Frieling, Mrs. J. J. Feuchter, and Mrs. J. A. Hutter and their hostesses, for their cordial and imaginative efforts in planning and arranging the pleasant accommodations and entertainment of our wives while attending the 25th Annual Meeting.

Resolution No. 2

WHEREAS, our esteemed member Donald M. McNeil, has devoted untiring efforts to the advancement of the Institute and its objectives for the past seven years, as Director Officer, and during this past year, as President, and

RESOLVED, that the membership of the Institute, on this occasion of the 25th Annual Meeting, at the time of his retirement from the presidency, hereby expresses its deep and sincere appreciation to him for his wise counsel, his inspirational leadership, and his significant contribution to the professional advancement of the organization.

Resolution No. 3

WHEREAS, The automotive Industry has provided outstanding advancement in the design and performance in modern vehicles, and

WHEREAS, modern limited access highway designs permit full use of performance capabilities of the modern vehicle, and

WHEREAS, relatively little possibility exists in improving the total performance potential of the average motorist, and

WHEREAS, incompatabilities of the highway, vehicle and driver where they exist, threaten the community economy and welfare;

THEREFORE, BE IT RESOLVED, that the Institute of Traffic Engineers stimulate greater considerations by its membership in matters of vehicular per-

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for Legibility . . . Strength . . . Quality

Check your requirements for quality traffic control signs and you'll find them all in Miro-Flex. See for yourself how the embossing of not less than 0.100 inch gives greater strength and makes Miro-Flex signs more legible because of the dimensional effect.

All Miro-Flex signs are furnished with the best baked-on enamel on zinc-coated, Bonderized steel to assure you of maximum durability without maintenance. See your Miro-Flex representative or write for your free copy of "Signs by Miro-Flex."

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formance, highway design and driver characteristics which so vitally affect the planning, design and operations of traffic and terminal facilities in order to achieve greater compatability among those elements.

BE IT FURTHER RESOLVED, that the Institute of Traffic Engineers develop the closest possible relationship and understanding with related professions, in order to bring vehicle technology, highway development and driver performance into balance.

Resolution No. 4

WHEREAS, current deficiencies in street and highway facilities and operations represent just cause for national concern and

WHERAS, there is an acute shortage of adequately trained engineers to meet the needs of an accelerated program of street and highway improvements,

BE IT THEREFORE RESOLVED, that the Institute of Traffic Engineers take steps

a) to encourage greater interest in traffic and highway professions among undergraduate students and

b) to recruit young men into the traffic engineering profession and

c) to stimulate and challenge the interest of practicing professional engineers.

Resolution No. 5

WHEREAS, the President of the United States has proposed an accelerated national highway program and

WHEREAS, enlightened leadership among influential lay citizens and public officials is the greatest single basic need for any program of significant gains in overcoming street and highway deficiences

BE IT RESOLVED, that the Institute of Traffic Engineers pledge to do its part in supporting and promoting the general objectives of the President's 50-Billion Dollar Highway Development Program.

JOSEPH E. HAVENNER
Chairman
JOHN H. BUNCH
NATHAN CHERNIACK
ROBERT D. DIER
THEODORE M. MATSON

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Wherever traffic control becomes difficult . . . during rush hours, street repair or emergency, these big, "steel-like" rubber traffic cones demand motorists respect. Available in two sizes, 18 inch and 28 inch, painted or reflectorized.

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CERTIFICATE OF COOPERATION

This certifies that, under the Program of the Foreign Operations Administration for the Government of the United States of America in cooperation with other Governments

WASHINGTON, D.C. SECTION, INSTITUTE OF TRAFFIC ENGINEERS

has made significant contribution to the achievement of the purposes of this program by furnishing technical assistance to selected representatives of the cooperating countries.

Issued at WASHINGTON, D.C.

this 21 day of JULY 1954

Last Spring 32 traffic authorities representing eleven foreign nations visited this country for a two-months study of U. S. Traffic handling methods. (TRAFFIC ENGINEERING—May 1954.) The study was sponsored by the Foreign Operations Administration in collaboration with the Organization for European Economic Cooperation. Near the close of the tour the Washington ITE Section entertained the group at a dinner meeting. Shown above is a photo of the scroll of appreciation which Mr. James Houska of the Foreign Operations Office presented President Henry K. Evans at the regular Washington Section Meeting on September 21st.

Strictly Business

New Perma-Lite "Blank-out sign" being tested in Portland, Oregon. The first section shows the sign message during normal traffic flow. At 4 P.M., the shade goes up (second section) to reveal the Part-Time Restriction message (third section). After the peak period passes, the normal traffic sign reappears.

Portland Tests New Double Message Sign

An entirely new type of "blank-out" traffic sign is being tested in the city of Portland, Oregon, with an eye toward using the type generally in the city's peak hour traffic restriction program, according to City Traffic Engineer, Fred T. Fowler.

The sign, designated "PTR" (abbreviation for Part Time Restriction) is manufactured by the Elwood Wiles Company, Portland, Oregon. It shows two alternating messages at predetermined times through a time-clock control. One message shows during normal traffic flow, another shows during peak hours.

In the Portland installation, the normal traffic sign is "NO LEFT TURN 4 PM - 6 PM." At 4 P.M., (peak hour) a new "NO LEFT TURN" message appears, to be replaced at 6 P.M. when the alternate ". . . 4 PM - 6 PM" message reappears.

In addition to its use as a peak hour restriction sign, the PTR can be used effectively as an automatically controlled advanced warning sign at railroad crossings, drawbridges or in any other situations where the motorist should be warned that danger lies ahead (such as in cases where subways or underpasses may become flooded).

The PTR is an interior illuminated traffic sign similar in construction and appearance to the Wiles' "Perma-Lite" sign, with the exception of a deeper cabinet. The method of operation is as follows:

The deeper PTR cabinet has two Plexiglas panels instead of the one normally used in the standard Perma-Lite sign. The first, a clear panel, is installed across the front of the sign, behind which is a heavy-duty translucent white vinyl impregnated shade (on which the desired regulatory message is imprinted). The shade is fastened to a spring roller, and is held in the lowered (or message showing) position by motor tension.

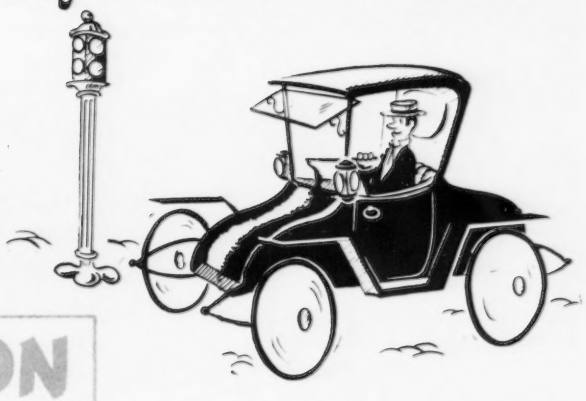
The motor, which consumes only twelve watts, is a "shaded-pole" electric motor with twice the torque necessary for the job. When the time-clock controlled motor releases this tension, the roller springs pull up the shade to reveal the part-time restriction message (imprinted on the inner translucent white Plexiglas panel). At a predetermined time, the motor again cuts in and lowers the shade. The interior sign message is not visible through the translucent shade (as seen in the first section of the photograph above), yet enough light passes through to give this message nearly the same long-distance readability.

As with the Perma - Lite luminous sign, the PTR is lighted by two or more "U" shaped cold cathode lamps rated at 15,000 hours each. This type of lamp is highly adaptable to flashing, and it is suggested by the manufacturer that the part-time restriction message be flashed to increase the impact of the sign. PTR signs can be built in any size from a minimum of 12″ high, 24″ long, and 10½″ deep. It is easily serviced because of its simple mechanical structure, and also because both front and rear panels of the sign are lowered and hang in place, leaving the entire sign open to servicing.

Because of its "behind the message" illumination, the PTR is said to provide long-distance readability under all weather conditions, and to completely overcome the nullifying effect of direct sunlight on the face of the sign.

The sign, according to its manufacturers, replaces wordy or otherwise ineffective and often disregarded signs with a positive restriction system. The PTR also eliminates manpower used to set up and remove portable signs; and also eliminates the use of extra police regulation at certain intersections during heavy traffic.

Don't Install Yesterday's Traffic Control



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MEETS ALL GROWING TRAFFIC NEEDS .... in the field

COMPARE . . . part for part with any other controller . . . JUDGE for yourself

MORE VERSATILE

The EF 20 is readily expansible . . . you can add new features on the job.

LOWER MAINTENANCE

This controller is designed for the easiest and lowest cost maintenance.

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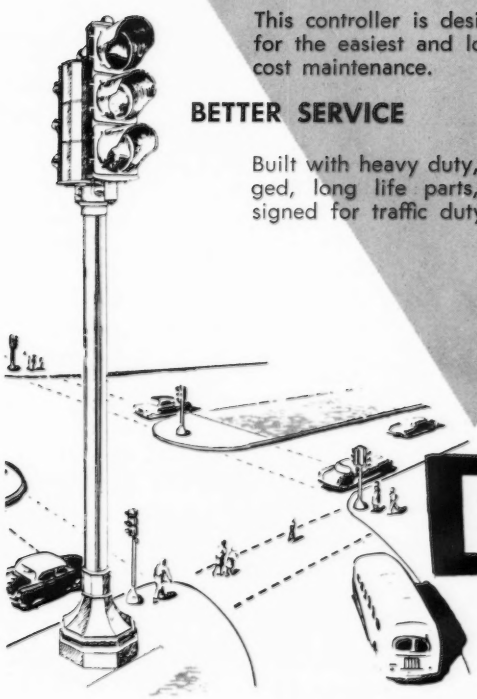
Built with heavy duty, rugged, long life parts, designed for traffic duty.



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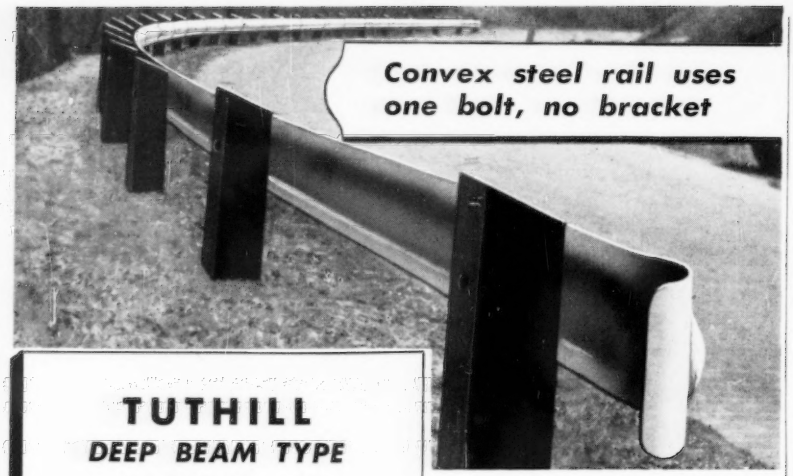

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Membership Applications

The following applications have been received since the list of applicants published last month.

APPLICATIONS FOR TRANSFER

BOUMAN, Martin J.
Associate City Traffic Engineer
Room 268, Civic Center
San Diego 1, California
September 28, 1954 for ASSOCIATE grade

CHENOWETH, Cecil Emerson
Assistant Traffic Operations Engineer
Illinois Division of Highways
405 East Washington Street
Springfield, Illinois
October 7, 1954 for MEMBER grade

MACDONALD, Bruce Briggs
Traffic Engineer II
The Port of New York Authority
111 Eighth Avenue
New York, N. Y.
October 8, 1954 for ASSOCIATE grade

MACNEE, Walter Quirk
Traffic Engineer
Department of Highways, Ontario
Room 1422, Parliament Buildings
Toronto, Ontario, Canada
September 27, 1954 for ASSOCIATE grade

MURPHY, James P.
Consulting Engineer
Crawford, Murphy & Tilly
755 South Grand Avenue, West
Springfield, Illinois
October 11, 1954 for MEMBER grade

VOORHEES, Alan Manners
Traffic Planning Engineer
Automotive Safety Foundation
200 Ring Building
1200-18th Street, N. W.
Washington, D. C.
September 24, 1954 for ASSOCIATE grade

NEW APPLICATIONS

DIERSTEIN, Arthur Lewis
Traffic Engineer, District 3
Illinois Division of Highways
700 E. Norris Drive
Ottawa, Illinois
October 4, 1954 for MEMBER grade

GARDNER, John W., Jr.
Junior Civil Engineer in Traffic Engineering
Department of Public Works
Division of Highways, District X
1200 North Center Street
Stockton, California
October 12, 1954 for JUNIOR grade

GRAVES, Richard Madison
Assistant Highway Engineer
Department of Public Works
Division of Highways, District 5
50 Higuera Street
San Luis Obispo, California
October 12, 1954 for ASSOCIATE grade

MAYER, Howard Charles
Lighting & Traffic Control Specialist
General Electric Company
570 Lexington Avenue
New York City, N. Y.
September 30, 1954 for JUNIOR grade

NOWELL, John Turner
Assistant Traffic and Planning Engineer
Clarkeson Engineering Company, Inc.
Box 75, Swansea, Massachusetts
October 11, 1954 for ASSOCIATE grade

SIMMONS, Albert Edward
Assistant District Engineer
Division of Highways
State of California
150 Oak Street
San Francisco, California
October 4, 1954 for MEMBER grade

SIMMONS, Cecil Lee
Assistant Traffic Engineer
City Hall
Grand Rapids, Michigan
October 11, 1954 for ASSOCIATE grade

SMITH, Kenneth Warren
Director of Traffic
City of Alexandria
815 South Payne Street
Alexandria, Virginia
October 4, 1954 for ASSOCIATE grade

Uniform Manual Revisions to Be Published

Revisions of the 1948 Manual on Uniform Traffic Control Devices, recommended by the Joint Committee on Uniform Traffic Control Devices last year, have now been officially approved by the American Association of State Highway Officials, the Institute of Traffic Engineers and the National Committee on Uniform Traffic Laws and Ordinances. The U. S. Bureau of Public Roads is having them published by the Government Printing Office, and it is expected that they will be available within a few weeks at a small charge, yet to be fixed.

With a single exception, the changes are to be found in the list of recommendations published in TRAFFIC ENGINEERING for May 1954. All these recommendations are approved, except No. 9, calling for deletion of the arrow in the KEEP RIGHT sign, sec. 42 of the Manual. This sign accordingly remains unchanged from the 1948 standard.

ON THE SHELF

Compiled by
Mrs. Kathryn Cassidy, Librarian
Yale Bureau of Highway Traffic

The publications herewith listed are not available for distribution by the Bureau or the Institute. Inquiries should be directed to the agency listed as publishing the material.

Highway Research Board

Traffic Assignment. The Board. 1952. 70 pp. (Bulletin No. 61.)

The papers, herein, represent the findings of several researchers into the comparative traffic usage of highway facilities of different degrees of attractiveness. Ratios of usage as found will be applicable for use in estimating diversion from existing facilities to proposed facilities under similar circumstances.

Kell, James H.

Comparison of Two Methods of Internal Origin-Destination Surveys. Purdue University, Lafayette, Indiana, Research Series No. 118. 1953. 158 pp. (Engineering Experiment Station and State Highway Commission of Indiana, Joint Highway Research Project in cooperation with the Bureau of Public Roads.)

A comparison of the controlled post-card survey (Ohio method) and the home-interview survey (Lynch method) made from the data obtained in the Logansport, Indiana, traffic survey. This report contains a survey narrative, discussion of the comparison analysis, a large number of informative figures and tables, and a series of conclusions and recommendations.

Levin, David R.

Zoning for Truck-Loading Facilities; Requirements for Off-Street Truck-Loading-and-Unloading Facilities in Zoning and Other Local Ordinances. The Highway Research Board. 1952. 101 pp. (Bulletin No. 59.)

This monograph is a companion study to a similar monograph dealing with requirements for off-street automobile-parking facilities, Bulletin 24, 1950, Highway Research Board.

Lister, R. D. and Stevenson, R. C.

A Fifth Wheel for Measuring Speed and Braking Distance. Reprinted from: M.I.R.A. Bulletin, Fourth Quarter, 1952. pp. 18-22.

This article describes a small fifth wheel designed primarily for measuring the speed and braking distance of vehicles by firing a cartridge to mark the road surface at the instant when the brakes are applied or by recording the number of revolutions made by the wheel between the instants of applying the brakes and the wheel coming to rest.

Los Angeles, California. City Engineer.

Comparison of Parkways with Surface Streets in Capacity, Time Savings, and Safety; a Report to the Board of Public Works. 1951. 7 pp.

Conclusion drawn from this study is that three times as much traffic can move on a parkway as on a similar surface boulevard, and can do so in half the time and with about one-fifth the risk of accident.

Los Angeles, California. Street and Parkway Design Division.

The Economy of Freeways. The Division, 1953. 14 pp.

A discussion of the estimated savings to the motorist when using freeways in lieu of surface streets concludes: (1) conservative maximum savings are shown to be 2c per vehicle mile; (2) large benefits to the region, (3) heavily used freeways in congested urban areas, while much more expensive to acquire and construct, pay for themselves more quickly than lower cost freeways in areas of less intense traffic demand.

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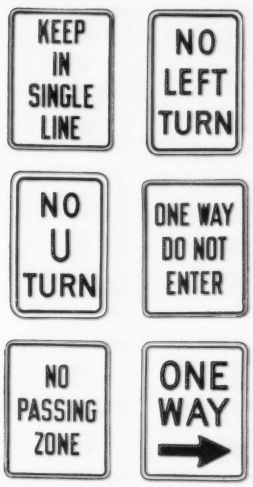

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Brittle, C. N.

A Mechanical Intervalometer for Photographic Speed Studies. Institute of Transportation and Traffic Engineering, University of California, Los Angeles, 1951. Research report No. 9-1.

It is the purpose of this paper to describe a mechanical intervalometer designed promarily for making vehicle speed studies and to show the accuracy that can be expected from its use. The device was used for a study on the Arroyo Seco Parkway in Los Angeles in the Spring of 1950, but had been designed and built as a separate project the previons year.

Institute of Traffic Engineers New Members and Transfers

Elected by Board of Direction September 26, 1954

TRANSFERS

HELLIWELL, Forrest H. (Associate)
Traffic Engineering Assistant
Department of Traffic
Room 1000, City Hall
Los Angeles 12, California

NEW MEMBERS

McDONALD, John Willard (Associate)
Assistant District Traffic V. Engineer
c/o California Division of Highways
50 Higuera Street
San Luis Obispo, California

Last month the name of John Willard McDonald was listed with the Transfers. Actually Mr. McDonald is a newly elected Associate Member.

MOSS, Guido (Associate)
Manager of Research and Schedules
St. Louis Public Service Company
3869 Park Avenue
St. Louis 10, Missouri

Perma-Lite Introduces First 100% Effective "Blank-Out" Sign!

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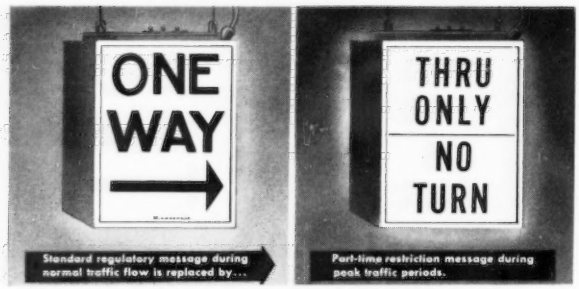
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Yearbook Changes

ABBING, Aart L. R. (Junior)
Traffic Engineer, Royal Netherlands Automobile Club. SEND MAIL: Willem de Twygerlaan 83, The Hague, The Netherlands.

BRANIGAN, Daniel A. (Member)
District Traffic Engineer, Illinois Division of Highways. SEND MAIL: 506 N. Dixon Avenue, Dixon, Illinois.

BUTTERFIELD, Stephen E. (Member)
City Traffic Engineer. SEND MAIL: 330 W. Johnson Street, Philadelphia 44, Pennsylvania.

CAMPBELL, Bruce (Junior)
Manager, Massachusetts Safety Council, 31 State Street, Boston 9, Massachusetts.

COPELL, Edgar F. (Member)
DeLeuw, Cather & Brill, 345 Boylston Street, Brookline 46, Massachusetts.

COTS, Thomas G. (Associate)
Traffic Engineer II, Cook County Highway Department. SEND MAIL: 7315 Karlov, Chicago 30, Illinois.

CURRY, William R. (Associate)
Associate Traffic Engineer, Washington Dept. of Highways. SEND MAIL: 1517 Capitol Way, Apartment 202, Olympia, Washington.

FORBES, Theodore W. (Associate)
Program Director—Highway, American Institute for Research, 410 Amberson Avenue, Pittsburgh 32, Pennsylvania.

HALEY, Charles E. (Associate)
City Traffic Engineer. SEND MAIL: 1216 E. Windsor Avenue, Phoenix, Arizona.

HENSLEY, Marble J. (Associate)
Traffic Engineer, 114 City Hall, Chattanooga, Tennessee.

HOWIE, George W. (Member)
Director of Public Utilities and Traffic, 417 Lincoln Park Drive, Cincinnati 3, Ohio.

HUMPHREY, H. Dale (Junior)
Yale Bureau of Highway Traffic. SEND MAIL: Box 82, Guilford, Connecticut (until June 1955).

HUTTER, Jack A. (Associate)
Director, Traffic Department, 17th Floor, City Hall, Kansas City 6, Missouri.

LENAU, Ray D. (Associate)
Assistant Traffic Engineer, California Division of Highways. SEND MAIL: 1313 Fitch Way, Sacramento 21, California.

NEWELL, Russell J. (Associate)
District Traffic Engineer, Illinois Division of Highways. SEND MAIL: 1542 W. Elmdale Avenue, Chicago 26, Illinois.

PARKER, Harry (Associate)
Traffic Design Engineer, Los Angeles County Road Department. SEND MAIL: 3416 Beethoven Street, Los Angeles 66, California.

PARKER, Walter M. (Member)
Highway Planning Engineer, Georgia State Highway Department. SEND MAIL: 526 Ponce de Leon Place, Decatur, Georgia.

THILLAINAYAGAM, R. (Associate)
Assistant Engineer (Highways), Highway Research Station, Engineering College P. O., Madras 25, India.

WELSH, James W. (Member)
500 Virginia Court, Winter Park, Florida (Until June 1955).

WILLIAMS, Earl C., Jr. (Junior)
Yale Bureau of Highway Traffic, Box 118, Guilford, Connecticut (Until June 1955).

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